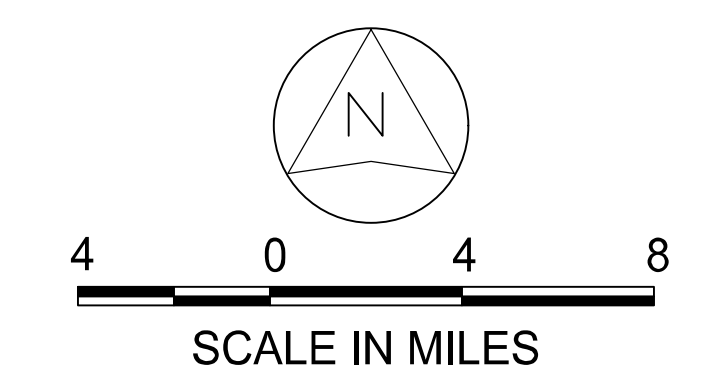
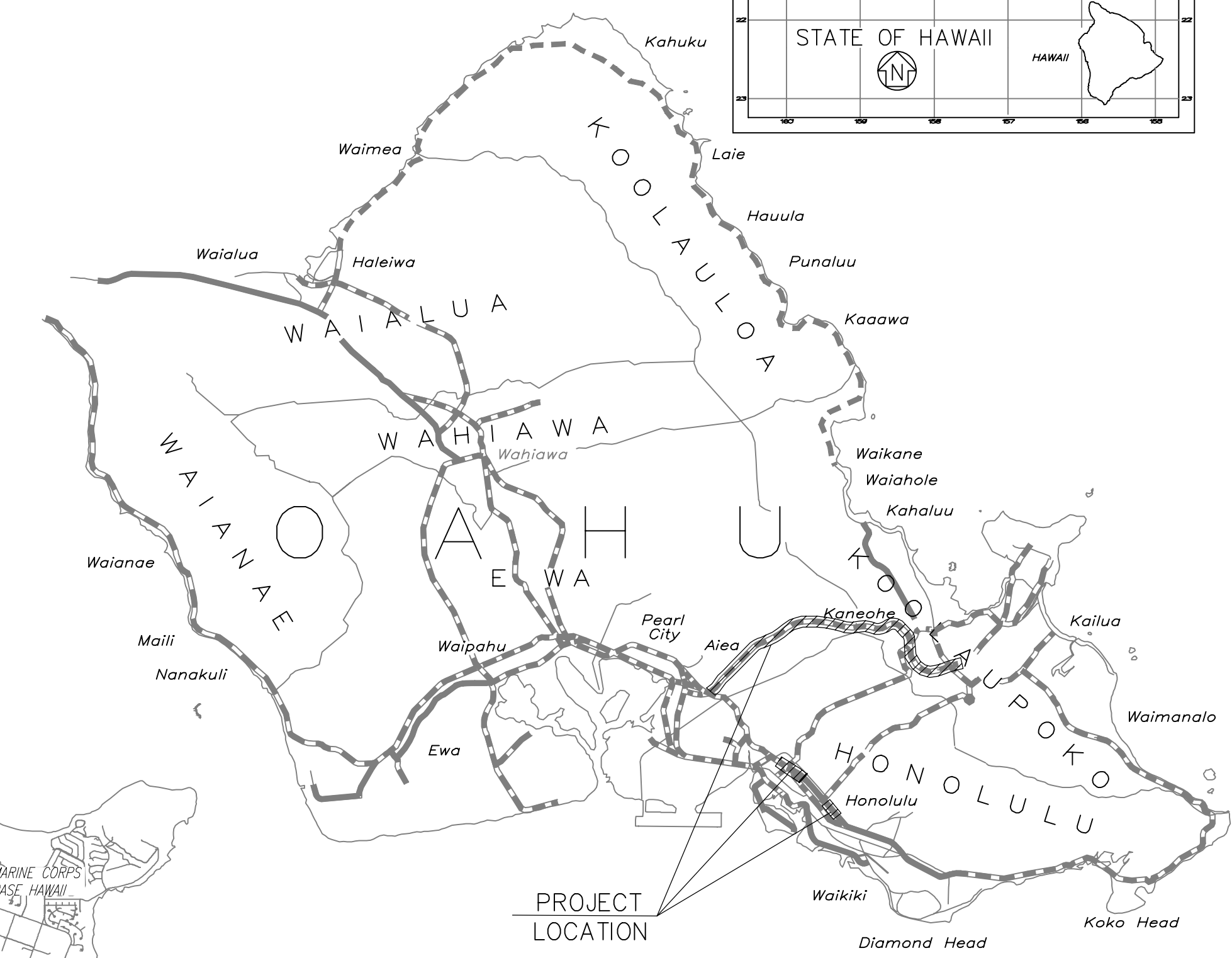
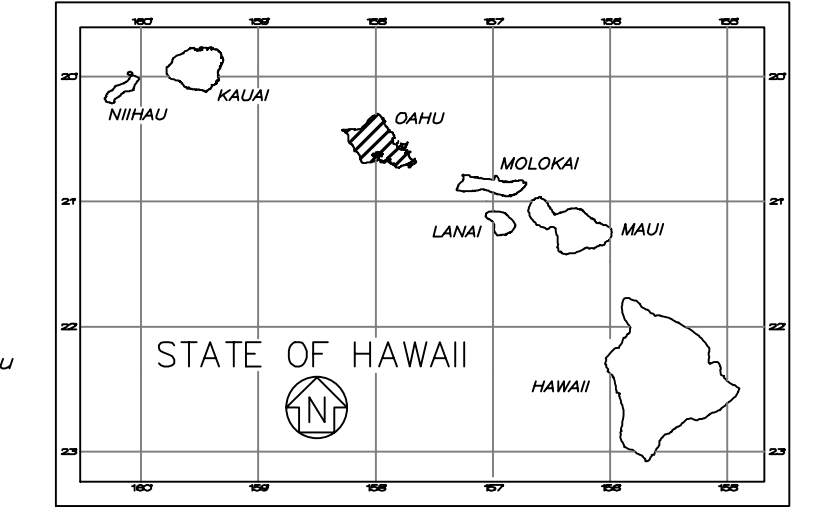
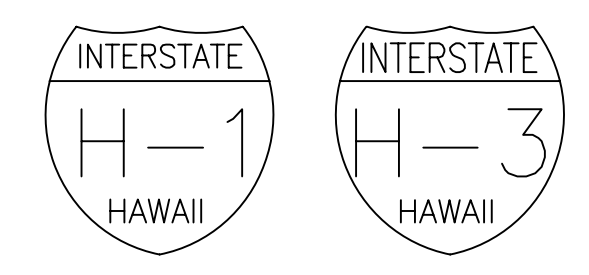


FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	1	111

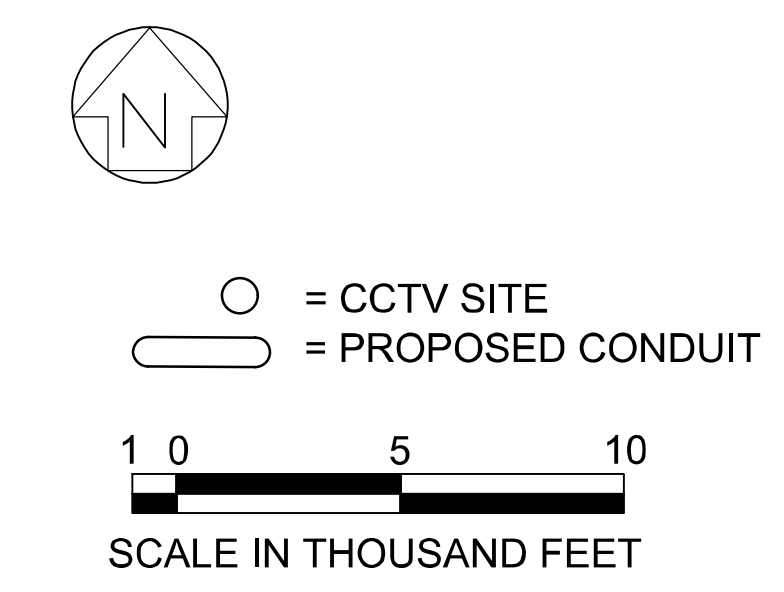
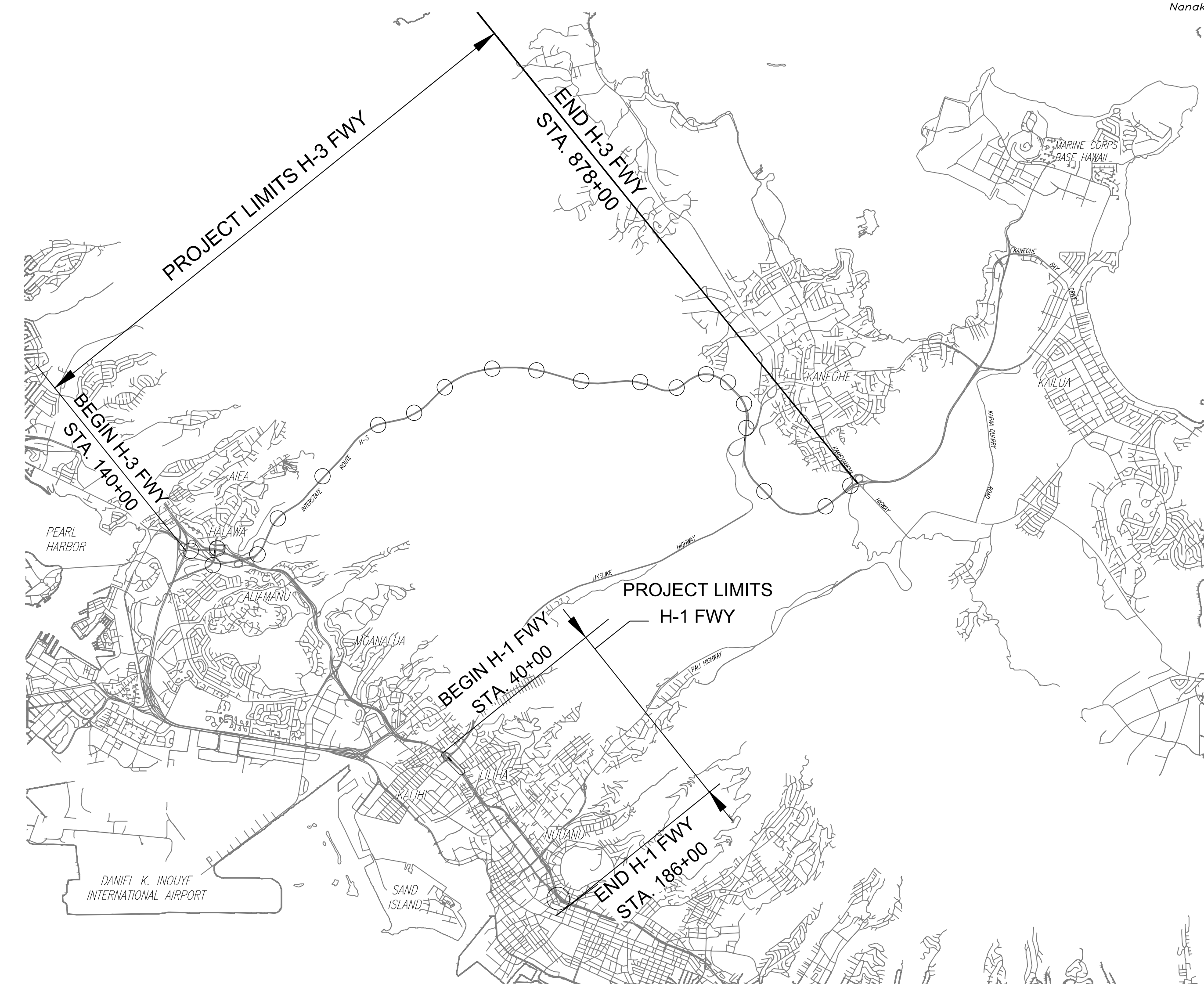
INDEX TO DRAWINGS	
SHEET NO.	DESCRIPTION
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2	STATE STANDARD PLAN SUMMARY
3-6	GENERAL CONSTRUCTION NOTES
7-10	EROSION & SEDIMENT CONTROL PLANS
11-12	ITS CONSTRUCTION NOTES
13-17	INDEX PLANS
18-81	ITS PLANS AND DETAILS
82-84	BORING LOGS
85-91	GUARDRAIL DETAILS
92-94	TRAFFIC CONTROL NOTES AND PLANS
95-111	ELECTRICAL PLANS AND DETAILS

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
HONOLULU, HAWAII

FREEWAY MANAGEMENT SYSTEM
PHASE 4
FEDERAL AID PROJECT NO. NH-0300(176)R
DISTRICTS OF EWA, HONOLULU, AND KOOLAUPOKO
ISLAND OF OAHU



H-1	MILE POST	19.57	TO	MILE POST	19.90
		21.13	TO		21.18
H-3	MILE POST	0.00	TO	MILE POST	11.16



APRIL 2026 DATE
768-2386 PHONE
HWY-IE MANAGED BY
ACCOM DESIGNED BY

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

APPROVED: 05/18
DIR. OF TRANSPORTATION DATE

G-01

STANDARD PLANS SUMMARY

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	2	111

STANDARD PLAN NO.	TITLE	DATE
B-01 ●	NOTES & MISCELLANEOUS DETAILS	05/31/07
B-03	BACKFILL DETAILS AT EARTH RETAINING STRUCTURES	05/31/07
B-12	PRESTRESSED CONCRETE PILES & COMPRESSION SPLICE CAN DETAILS	05/31/07
B-12A	PRESTRESSED CONCRETE PILES, PILE & COMPRESSION SPLICE CAN DETAILS & NOTES	05/31/07
B-12B	PILE INTERACTION DIAGRAM	05/31/07
B-13	PRESTRESSED CONCRETE PILE BUILD-UP DETAILS	05/31/07

D-01	CATTLE GATE	05/31/07
D-02	CHAIN LINK FENCE WITH TOPRAIL	05/31/07
D-03	CHAIN LINK FENCE WITHOUT TOPRAIL	05/31/07
D-04	WIRE FENCE WITH METAL POSTS	05/31/07
D-05	TYPICAL DETAILS OF CURBS AND/OR GUTTERS	05/31/07
D-06	TYPICAL DETAIL OF REINFORCED CONCRETE DROP DRIVEWAY	05/31/07
D-07	CENTERLINE AND REFERENCE SURVEY MONUMENTS	05/31/07
D-08	STREET SURVEY MONUMENT	05/31/07
D-15	CONCRETE SIDEWALK	05/31/07
D-16	P.C.C. BUS PAD	05/31/07
D-17	P.C.C. BUS PAD	05/31/07
D-18	P.C.C. PAVEMENT LAYOUT	05/31/07
D-19	P.C.C. PAVEMENT W/ PERMEABLE BASE JOINT DETAILS	05/31/07
D-20	P.C.C. PAVEMENT W/ PERMEABLE BASE JOINT DETAILS	05/31/07
D-21	P.C.C. LONGITUDINAL JOINT DETAILS	05/31/07
D-22	P.C.C. CONNECTION TO CURBS AND GUTTERS	05/31/07
D-23	JOINTS	05/31/07

L-01	TREE PLANTING	08/16/06
L-02	TREE PLANTING	08/16/06
L-03	TREE TRANSPLANTING	08/16/06
L-04	PALM PLANTING	08/16/06
L-05	SHRUB PLANTING	08/16/06
L-06	LANDSCAPE DETAILS	08/16/06
L-07	LANDSCAPE DETAILS	08/16/06
L-08	LANDSCAPE DETAILS	08/16/06
L-09	LANDSCAPE DETAILS	08/16/06
L-10	LANDSCAPE DETAILS	08/16/06
L-11	PLANTING NOTES	08/16/06
L-12	IRRIGATION DETAILS	08/16/06
L-13	IRRIGATION DETAILS	08/16/06
L-14	IRRIGATION DETAILS	08/16/06
L-15	IRRIGATION DETAILS	08/16/06
L-16	IRRIGATION DETAILS	08/16/06
L-17	IRRIGATION DETAILS	08/16/06
L-18	IRRIGATION DETAILS	08/16/06
L-19	IRRIGATION DETAILS	08/16/06
L-20	IRRIGATION DETAILS	08/16/06
L-21	IRRIGATION DETAILS	08/16/06
L-22	IRRIGATION DETAILS	08/16/06
L-23	IRRIGATION DETAILS	08/16/06
L-24	IRRIGATION NOTES	08/16/06

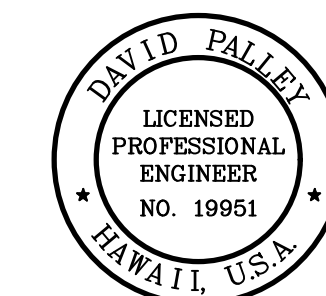
STANDARD PLAN NO.	TITLE	DATE
H-01A	TYPE A CATCH BASIN	05/31/07
H-01B	TYPE B CATCH BASIN	05/31/07
H-01C	TYPE C CATCH BASIN	05/31/07
H-01D	TYPE D CATCH BASIN	05/31/07
H-01E	CATCH BASIN SECTIONS	05/31/07
H-02A	TYPE A1 CATCH BASIN	05/31/07
H-02B	TYPE B2 CATCH BASIN	05/31/07
H-02C	TYPE C1 CATCH BASIN	05/31/07
H-02D	TYPE D1 CATCH BASIN	05/31/07
H-02E	CATCH BASIN SECTION	05/31/07
H-03	TYPE A, B, AND C STORM DRAIN MANHOLE	05/31/07
H-04	TYPE D STORM DRAIN MANHOLE	05/31/07
H-05	TYPICAL REINFORCING DETAILS FOR DRAINAGE STRUCTURES	05/31/07
H-06	TYPICAL REINFORCING DETAILS FOR DRAINAGE STRUCTURES	05/31/07
H-07	CATCH BASIN AND MANHOLE CASTINGS	05/31/07
H-08	TYPE 1A-9 AND 1A-9P GRATED DROP INLET	05/31/07
H-09	TYPE 2A-9 AND 2A-9P GRATED DROP INLET	05/31/07
H-10	TYPE A-9 OR A-9P STEEL FRAMES	05/31/07
H-11	TYPE A-9 AND A-9P STEEL GRATES	05/31/07
H-12	TYPE 61614P AND 1211214P GRATED DROP INLET	05/31/07
H-13	TYPE 61616P AND 1211216P GRATED DROP INLET	05/31/07
H-14	TYPE 61214P GRATED DROP INLET	05/31/07
H-15	TYPE 1211214, 1211214P, 1211216, 1211216P STEEL FRAME AND GRATES	05/31/07
H-16	TYPE 61614, 61614P, 61616, 61616P STEEL FRAME AND GRATES	05/31/07
H-17	TYPE 61214 STEEL FRAMES AND GRATES	05/31/07
H-18	TYPE 61214P STEEL GRATES	05/31/07
H-19	TYPE 61614B STEEL FRAME AND GRATES	05/31/07
H-20	CEMENT RUBBLE MASONRY STRUCTURES	05/31/07
H-21	CONCRETE AND CEMENT RUBBLE MASONRY STRUCTURES	05/31/07
H-22	INLET/OUTLET STRUCTURE	05/31/07
H-23	INLET/OUTLET STRUCTURE	05/31/07
H-24	FLARED END SECTION FOR CULVERTS	05/31/07
H-25	FLARED END SECTION FOR CULVERTS	05/31/07
H-26	CONCRETE SPILLWAY INLET	05/31/07
H-27	CAP COUPLING DETAILS STANDARD JOINT	05/31/07
H-28	REINFORCED CONCRETE COLLAR & JACKET	05/31/07
H-29	UNDERDRAIN CLEANOUT STEEL FRAME AND COVER	05/31/07
H-30	UNDERDRAIN CONNECTION TO DRAINAGE STRUCTURE	05/31/07

TE-01	SIGN HEIGHT AND LOCATION	07/11/08
TE-1A	SIGN INSTALLATION	07/11/08
TE-02A	GALVANIZED FLANGED CHANNEL SIGN POST MOUNTING	05/31/07
TE-02B	GALVANIZED FLANGED CHANNEL SIGN POST MOUNTING	05/31/07
TE-02C	GALVANIZED FLANGED CHANNEL SIGN POST MOUNTING	05/31/07
TE-03A	GALVANIZED SQUARE TUBE SIGN POST MOUNTING	05/31/07
TE-03B	GALVANIZED SQUARE TUBE SIGN POST MOUNTING	05/31/07
TE-04	REGULATORY SIGNS	07/11/08
TE-05	WARNING SIGNS	07/11/08
TE-06	MISCELLANEOUS SIGNS	07/11/08
TE-07	CONSTRUCTION SIGNS	07/11/08
TE-08	MISCELLANEOUS INTERSECTION SIGNS	07/11/08

STANDARD PLAN NO.	TITLE	DATE
TE-09	BIKE ROUTE SIGN & SUPPLEMENTARY PLATES	07/11/08
TE-10	INTERSTATE ROUTE MARKER	07/11/08
TE-11	STATE ROUTE MARKER AND AUXILIARY MARKERS	07/11/08
TE-12	STATE ROUTE MARKER AND BORDER DETAIL FOR GUIDE SIGNS	07/11/08
TE-12A	ROUTE SIGN ASSEMBLIES	07/11/08
TE-13	STREET NAME SIGN ON MAST ARM	07/11/08
TE-14	MISCELLANEOUS REFLECTOR MARKERS	07/11/08
TE-15	OBJECT MARKERS	07/11/08
TE-16	MILE POSTS	07/11/08
TE-17A	CANTILEVER OVERHEAD SIGN ELEVATION & DETAILS	05/31/07
TE-17B	CANTILEVER SIGN FRAME DETAIL AND SECTION	05/31/07
TE-17C	CANTILEVER SIGN FRAME DETAIL	05/31/07
TE-17D	CANTILEVER SIGN FRAME SECTION	05/31/07
TE-17E	CANTILEVER SIGN FRAME DETAILS	05/31/07
TE-18A	TWO POST OVERHEAD SIGN FRAME ELEVATIONS	05/31/07
TE-18B	TWO POST SIGN FRAMING PLAN SECTION	05/31/07
TE-18C	TWO POST SIGN FRAMING SECTIONS AND DETAILS	05/31/07
TE-18D	TWO POST SIGN FRAME DETAILS	05/31/07
TE-18E	TWO POST SIGN FRAME DETAILS	05/31/07
TE-19A	OVERHEAD SIGN FRAMING SCHEDULE	05/31/07
TE-19B	SIGN POST DRILLED SHAFT FOUNDATION	05/31/07
TE-19C	SPREAD FOOTING	05/31/07
TE-19D	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.1	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.2	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.3	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.4	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.5	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19E	ANCHORAGE DETAILS	05/31/07
TE-19F	ANCHORAGE DETAILS	05/31/07
TE-19G	MISCELLANEOUS SIGN FRAME DETAILS	05/31/07
TE-19H	LUMINAIRE WALKWAY SUPPORT	05/31/07
TE-19J	FIXED MESSAGE LUMINAIRE SUPPORT	05/31/07
TE-19K	MISCELLANEOUS SIGN DETAILS	05/31/07
TE-19L	MISCELLANEOUS SIGN DETAILS	05/31/07
TE-19M	MISCELLANEOUS SIGN FRAME DETAILS	05/31/07
TE-20	SUPPORTS FOR GROUND MOUNTED GUIDE SIGN	05/31/07
TE-20A	SUPPORTS FOR GROUND MOUNTED GUIDE SIGN	05/31/07
TE-20B	SUPPORTS FOR GROUND MOUNTED GUIDE SIGN	05/31/07
TE-20C	SUPPORTS FOR GROUND MOUNTED GUIDE SIGN	05/31/07
TE-21A	SIGN BREAKAWAY MOUNTS	05/31/07
TE-21B	SIGN BREAKAWAY MOUNTS	05/31/07
TE-22	LAMINATED ALUMINUM SIGN PANELS (OVERHEAD)	05/31/07
TE-23	LAMINATED ALUMINUM SIGN PANELS (GROUND MOUNTED)	07/11/08
TE-24	SOLID ALUMINUM EXTRUDED SIGN PANEL AND	05/31/07

STANDARD PLAN NO.	TITLE	DATE
	ACCESSORY DETAILS	
TE-25	GUIDE SIGNS LUMINAIRE MOUNTINGS	05/31/07
TE-26	RAISED PAVEMENT MARKERS AND STRIPING	07/11/08
TE-27	RAISED PAVEMENT MARKERS AND STRIPING	07/11/08
TE-28	ENTRANCE AND EXIT PAVEMENT MARKINGS	07/11/08
TE-28A	MISCELLANEOUS PAVEMENT MARKINGS	07/11/08
TE-29	PAVEMENT ARROWS AND SYMBOLS	07/11/08
TE-30	PAVEMENT ALPHABETS, NUMBERS & SYMBOLS	07/11/08
TE-31	PAVEMENT ALPHABETS, NUMBERS & SYMBOLS	07/11/08
TE-32	TYPE I & II TRAFFIC SIGNAL SYSTEM MISC. DETAILS	05/31/07
TE-33	TYPE II TRAFFIC SIGNAL SYSTEM	08/16/06
TE-33A.1	TYPE II TRAFFIC SIGNAL STANDARD	05/31/07
TE-33A.2	TYPE II TRAFFIC SIGNAL STANDARD	05/31/07
TE-34	LOOP DETECTOR DETAILS	07/11/08
TE-35	LOOP DETECTORS & DUCT DETAILS	07/11/08
TE-36	TRAFFIC SIGNAL DETAILS	07/11/08
TE-37 ●	PULLBOX & COVER DETAILS	07/11/08
TE-37A ●	TYPE "A" TRAFFIC PULLBOX	05/31/07
TE-37B ●	TYPE "A" TRAFFIC PULLBOX REINFORCING	05/31/07
TE-37C ●	TYPE "B" TRAFFIC PULLBOX	05/31/07
TE-37D ●	TYPE "B" TRAFFIC PULLBOX REINFORCING	05/31/07
TE-37E ●	TYPE "B" TRAFFIC PULLBOX FOUNDATION	05/31/07
TE-37F ●	TYPE "C" TRAFFIC PULLBOX	05/31/07
TE-37G ●	TYPE "C" TRAFFIC PULLBOX REINFORCING	05/31/07
TE-37H ●	TYPE "C" TRAFFIC PULLBOX FOUNDATION	05/31/07
TE-37J ●	TRAFFIC PULLBOX COVER AND DETAILS	05/31/07
TE-38	TYPE III TRAFFIC SIGNAL STANDARD	05/31/07
TE-38A.1	TYPE III TRAFFIC SIGNAL STANDARD	05/31/07
TE-38A.2	TYPE III TRAFFIC SIGNAL STANDARD	05/31/07
TE-39	METAL GUARDRAIL CONNECTION TO CONCRETE BARRIER	07/11/08
TE-40	CONCRETE BARRIER TRANSITION	05/31/07
TE-40A	CONCRETE BARRIER TRANSITION SECTIONS	05/31/07
TE-41	GUARDRAIL TYPE 4 (RIGID BARRIER)	05/31/07
TE-42	PORTABLE CONCRETE BARRIER	05/31/07
TE-43	PORTABLE CONCRETE BARRIER	05/31/07
TE-44	GUARDRAIL TYPE 4 MISCELLANEOUS DETAILS	07/11/08
TE-45 ●	BARRICADES	07/11/08
TE-46	DELINEATION & PAVEMENT MARKINGS AT NARROW BRIDGES	07/11/08
TE-47 ●	HIGHWAY LIGHT STANDARD	05/31/07

ORIGINAL PLAN DRAWN BY _____ DATE _____
 SURVEY PLOTTED BY _____
 TRACED BY _____
 DESIGNED BY _____
 QUANTITIES BY _____
 CHECKED BY _____
 No. _____



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
 Signature: _____
 EXPIRATION DATE OF LICENSE: 4/20/2028

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
ITS
STANDARD PLAN SUMMARY
Freeway Management System, Phase 4
Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

NOTE:
 STANDARD PLANS APPLICABLE TO THIS PROJECT ARE INDICATED BY A "●" NEXT TO THE STANDARD PLAN NO. (For Example: D-07 ●)

GENERAL NOTES:

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	3	111

- The scope of work includes the replacement and installation of new CCTV ITS cameras on existing poles, replacement and installation of new ITS conduits, and guardrail improvements.
- The Contractor is reminded of the requirements of Subsection 105.16 – Subcontracts, which requires him to perform work amounting to not less than 30 percent of the total contract cost less deductible items. Non-compliance with this Subsection may be grounds for rejection of bid.
- The Contractor's attention is directed to the following Sections of the Standard Specifications and Special Provisions: Subsection 104.11 – Utilities and Services; Subsection 107.06 – Contractor Duty Regarding Public Convenience; Subsection 107.11 – Safety: Accident Prevention; Subsection 107.12 – Protection of Persons and Property; and Section 645 – Work Zone Traffic Control.
- At the end of each day's work, the Contractor shall remove all equipment and other obstructions to permit free and safe passage of public traffic.
- The existence and location of underground utilities, manholes, monuments and structures as shown on the plans are from the latest available data but the accuracy is not guaranteed. The encountering of other obstacles during the course of work is possible. The Contractor shall be held liable for any damages incurred to the existing facilities and/or improvements as a result of his operations. The Contractor will immediately report to the Engineer and utility companies damage discovered or caused by his work to any utilities. All damaged portions shall be replaced or repaired in accordance with the standards and specifications of the affected utility company at the Contractor's expense.
- The existing drainage system will be functional at all times during construction. The Contractor is to furnish materials, equipment, labor, tools and incidentals necessary to maintain flow. This work shall be considered incidental to various contract items.
- The Contractor shall provide for free and safe access to and from all existing side streets at all times.
- All saw cutting work shall be considered incidental to structural excavation or roadway excavation.
- Where pedestrian walkways exist, they shall be maintained in a safe and passable ADA compliant condition, or other facilities for pedestrians shall be provided. Passages between walkways at intersections shall likewise be provided at all times. The Contractor shall maintain at least one paved shoulder free and clear of debris for pedestrian and bicycle traffic at the end of each work day. The Contractor shall provide for access to and from all existing driveways at all times. The Contractor shall coordinate with the Homeowner if driveway closure is required.
- The Contractor shall comply with the directives of the State of Hawaii Occupational Safety And Health Law (HIOSH). Any citation (fine) received by the State for noncompliance by the Contractor shall be deducted from the progress payment.
- This project may affect bus operations, bus routes, bus stops, and para-transit operations. At least two (2) weeks prior to construction, the Contractor shall provide notification of the scope of work, location, detour, proposed closure of any street, traffic lane, sidewalk, or bus stop and duration of project to:

DTS-PTD: 768-8396 and TheBusStop@honolulu.gov
Oahu Transit Services:
Bus Operations: 848-4571 and 848-4565 and Field_Operation_Mgr@thebus.org
Para-transit Operations: 454-5006 and 454-5083
- The Contractor shall follow the requirements of various permits and Best Management Practices (BMP) during the construction.
- No work or equipment shall be located or take place within 10' of any overhead wires or any HECO utility pole without prior acceptance from the Engineer and HECO. No excavation shall take place within 5' of any HECO utility pole without prior acceptance from the Engineer and HECO.
- The Contractor is advised that in addition to other Contractors working in the same areas, various utility companies (or their contractors) including Hawaiian Electric Company, Hawaiian Telcom, Spectrum, Hawaii Gas, and the Board of Water Supply (BWS) may be performing work within the project area. Comply with Subsection 105.09 Coordination Between the Contractors.
- The Contractor shall coordinate all work with other Contractors in the areas. In case of unreasonable conflict among contractors regarding access or work sites, the Engineer will make the final determination of priorities.
- Smooth riding connections shall be constructed at all limits of the project, including the beginning and end of project, connecting approaches, side streets, driveways and all trench repairs as shown on the plans and/or as directed by the Engineer. Test in the presence of the Engineer with a 12-foot straight edge all pavement surface areas mentioned. It shall not vary more than 1/8 inch from the lower edge of a straightedge. Driveways may be excluded by the Engineer and another method used.
- All necessary permits shall be obtained by the Contractor at his own cost.
- The Contractor shall exercise extreme caution to preserve BENCHMARKS (Survey Monuments). Whenever the center of a Survey Monument is less than three (3) feet away from the edge of construction, the Contractor shall retain a Licensed Land Surveyor to reference the location of said survey monument.

- Benchmarks that are disturbed or destroyed shall be restored under a licensed Land Surveyor's direction. Copies of field notes, descriptions and new values of the replaced Benchmark shall be sent to the Department of Transportation, highways Division, Cadastral Engineering Section, for review and approval before commencement of construction.
- The Contractor is reminded to call the Hawaii One Call Center at (866) 423-7287 prior to starting any excavation work.
- The Contractor shall indemnify and be solely responsible for the protection of adjacent properties, utilities, curbs, sidewalks, and existing structures from damage due to construction. Repairing any damage shall be at the Contractor's own expense, to the satisfaction of the Engineer.
- The Contractor shall observe and comply with the administrative rules of The Department of Health regarding noise control of Oahu.
- No section of incomplete guardrail, footing and/or excavation shall be left unshielded at the end of each work day. Intermediate concrete barriers and crash cushion end treatments used for shielding shall meet current SOH DOT standards and guidelines along with manufacturer's specifications. All shielding used during construction shall be considered incidental to various guardrail items. A minimum of five concrete barriers shall be used before and beyond the work zone.
- All work specified in the Contract but not listed separately in the proposal schedule shall be considered incidental to the various contract items and shall not be paid for separately.

HAWAII ONE CALL CENTER:

- Before conducting any excavation in the public right of way or on private property, call the Hawaii One Call Center at least five (5) working days before planning to dig. Be sure to give them the address and location of the nearest cross street(s) near where digging is planned.

Call 811 toll-free 24 hours a day.
For more information, go to www.callbeforeyoudig.org
- The Hawaii One Call Center will contact all utility companies to tone, mark or identify the location of their underground utilities for free. Mark the area where Contractor plans to excavate in white and label all of the other utilities as listed below.

- RED Electric power lines, cables, or conduits, and lighting cables.
- YELLOW Gas, oil, steam, petroleum or other hazardous liquid or gaseous materials.
- ORANGE Communications, cable TV, alarm or signal lines, cables, or conduits.

- BLUE Water, irrigation, and slurry lines
- GREEN Sewers, storm sewer facilities or other drain lines
- WHITE Proposed excavation.
- PINK Temporary survey markings.
- PURPLE Reclaimed water, irrigation and slurry lines.

PUBLIC HEALTH, SAFETY, AND CONVENIENCE NOTES:

- The Contractor shall observe and comply with all Federal, State, and Local laws required for the protection of public health and safety and environmental quality.
- The Contractor, at his own expense, shall keep the project and its surrounding areas free from dust nuisance. The work shall be in conformance with the air pollution control standards and regulations of the State Department of Health. The City may require supplementary measures as necessary.
- No Contractor shall perform any trenching operation so as to cause falling rocks, soil or debris in any form to fall, slide or flow onto adjoining properties, streets or natural water-courses. Should such violations occur, the cost incurred shall be borne by the Contractor. For any remedial action by the Director, HDOT shall be payable by the Contractor.
- The Contractor shall provide, install and maintain all necessary signs, lights, flares, barricades, markers, cones, and other protective facilities and shall take all necessary precautions for the protection, convenience, and safety of the public. The Contractor shall apply for a construction permit with a noise pollution control plan if work should extend beyond permitted working hours.

CHANGES TO DESIGN CRITERIA FOR BRIDGES AND STRUCTURES:

- The Contractor shall use the Bridge Design Criteria dated 8-8-2014 as modified by Changes to Design Criteria for Bridges and Structures dated 1-8-2018 (HWY-DB 2.5098).

ORIGINAL PLAN	DATE
NO. _____	_____
DESIGNED BY _____	_____
CHECKED BY _____	_____
QUANTITIES BY _____	_____
TRACED BY _____	_____
DRAWN BY _____	_____
STUDY PLOTTED BY _____	_____



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
 Signature: *David Palley*
 EXPIRATION DATE OF LICENSE: 4/20/2028

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

GENERAL NOTES

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. G-03 OF 111 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	4	111

ARCHAEOLOGICAL NOTES:

- In the event that an archaeological or historic structure within the work area is inadvertently damaged during construction, cease work in the vicinity of the site and notify the Engineer and the State Historic Preservation Division (SHPD) of the Department of Land and Natural Resources of the damage. SHPD will determine the appropriate mitigation measures.
- In the event that a previously unknown archaeological feature is exposed by construction, cease work in the vicinity of the new feature and notify the Engineer and SHPD of the new discovery.
- In the event that previously unknown human remains are exposed by construction, cease all work in the area of the remains, and protect the area with an appropriate material. Notify the Engineer and SHPD at 692-8015.
- If human remains are discovered, HAR Title 13, Subtitle 13, Chapter 300 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the State Historic Preservation Division and the Police Department will be contacted. The appropriate process would then proceed in conformance with HAR 13-300 Subchapter 4, "Procedures for Proper Treatment of Burial Sites and Human Skeletal Remains."
- If any lava tube or coral cavern is uncovered during earthwork operations, the Contractor shall cease all ground work in the area and immediately notify the Archaeological Monitor and the Engineer. With or without the help of the Archaeological Monitor, the Engineer will assess the situation. If the Engineer has any doubts as to the extent and/or significance of the discovery, the Engineer will contact the appropriate regulatory agency (e.g., State Historic Preservation Division).

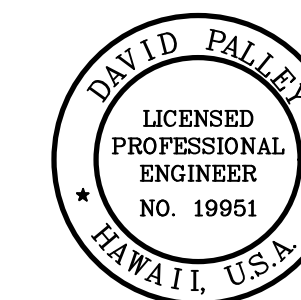
ABBREVIATIONS:

AFG	Above Finished Grade
BL	Base Line
BC	Bottom Curb
cb	Catch Basin
CL	Center Line
CRM	Concrete Rubble Masonry
di	Drain Inlet
Dia.	Diameter
ep	Existing Edge of Pavement
Ep	Edge of Pavement
es	Existing Edge of Shoulder
ES	Edge of Shoulder
et	Existing Edge of Travel Way
ET	Edge of Travel Way
Exist.	Existing
F'c	Minimum Specified Compressive Strength of Concrete
HDOT	Hawaii Department of Transportation
HMA	Hot Mix Asphalt
KAL	Kalaniana'ole Highway Alignment
LF	Linear Feet
Lt.	Left
MBGR	Existing Metal Beam Guardrail
Max.	Maximum
MGS	Midwest Guardrail System
Min.	Minimum
No.	Number
NTS	Not to Scale
NWC	Normal Weight Concrete
o.c.	On Center
O/S, o/s	Offset
PC	Point of Curvature
PCF	Pounds per Cubic Foot
PT	Point of Tangency
P	Property Line
R	Radius
RPM	Raised Pavement Marker
R/W, r/w	Right-of-way
Rt.	Right
SF	Square Feet
Shts.	Sheets
SOH	State of Hawaii
Sta.	Station
TC	Top Curb
Thk.	Thick
TMK	Tax Map Key
Typ.	Typical
UNO	Unless Noted Otherwise

LEGEND

○ _m	Existing Reflector Marker
□ _{lp}	Existing Light Pole
—swl—	Single White Line
—syl—	Single Yellow Line
==dyl==	Double Yellow Line
s/bar	Existing Stop Bar
byl	Existing Broken Yellow Line
● _{mon.}	Existing Monument
⊥	Existing Traffic Sign
—r/w	Existing Right-of-Way Line
—	Existing Fence

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THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

David Palley

SIGNATURE

4/20/2028
EXPIRATION DATE
OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ARCHAEOLOGICAL NOTES

Freeway Management System, Phase 4
Federal Aid Project No. NH-0300(176)R
Scale: As Indicated Date: April 2026

SHEET No. G-04 OF 111 SHEETS

WATER POLLUTION AND EROSION CONTROL NOTES:

FED. ROAD DIST. NO.	STATE	FEDERAL-AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	5	111

A. GENERAL:

- See Special Provisions Section 209 – Water Pollution and Erosion Control. Section 209 describes but is not limited to: submittal requirements; scheduling of a water pollution and erosion control conference with the Engineer; construction requirements; method of measurement; and basis of payment. In addition, Appendix A lists potential pollutant sources and corresponding BMPs used to mitigate the pollutants.
- Follow the guidelines in the current HDOT Construction Best Management Practices Field Manual in developing, installing and maintaining the Best Management Practices (BMP) for the project. For any conflicting requirements between the Manual and applicable bid documents, the applicable bid documents will govern. Should a requirement not be clearly described within the applicable bid documents, the Contractor shall notify the Engineer immediately for interpretation. For the purposes of clarification under Note A.2, "applicable bid documents" include the construction plans, standard specifications, Special Provisions, Permits, and the Storm Water Pollution Prevention Plan (SWPPP) when applicable.
- Follow the guidelines in the Honolulu's City & County "Rules Relating to Soil Erosion Standards and Guidelines" along with applicable Soil Erosion Guidelines for projects on Maui, Molokai, Kauai, and Hawaii.
- The Engineer may assess liquidated damages of up to \$27,500 for non-compliance of each BMP requirement and each requirement stated in Section 209 and special provisions, for every day of non-compliance. There is no maximum limit on the amount assessed per day.
- The Engineer will deduct the cost from the progress payment for all citations received by the Department for non-compliance, or the Contractor shall reimburse the State for the full amount of the outstanding cost incurred by the State.
- If necessary, install a rain gage prior to any field work including the installation of any site-specific best management practices. The rain gage shall have a tolerance of at least 0.05 inches of rainfall. Install the rain gage on the project site in an area that will not deter rainfall from entering the gage opening. Do not install in a location where rain water may splash into rain gage. The rain gage installation shall be stable and plumbed. Do not begin field work until the rain gage is installed and site-specific best management practices are in-place.
- Submit Site-Specific BMP Plan to the Engineer along with a completed Site-Specific BMP Review Checklist within 21 calendar days of date of award. The Site-Specific BMP Review Checklist may be obtained from <http://www.stormwaterhawaii.com>.
- Sediment and Erosion Control BMP measures shown in the Contract Documents are minimum BMP requirements and do not constitute an acceptable and/or complete Erosion Control

Plan. The Contractor shall incorporate additional BMPs based upon their means and methods considering site conditions and construction sequence in accordance with the Contract Documents including applicable permit document requirements. Cost shall be included in Pay Item 209.0100, Installation, Maintenance, Monitoring, and Removal of BMP."

B. WASTE DISPOSAL:

- Waste Materials. Collect and store all waste materials in a securely lidded metal dumpster or roll off container with cover to keep rain out or loss of waste during windy conditions. The dumpster shall meet all local and State solid waste management regulations. Deposit all trash and construction debris from the site in the dumpster. Empty the dumpster weekly or when the container is two-thirds full, whichever is sooner. Do not bury construction waste materials onsite. The Contractor's supervisory personnel shall be instructed regarding the correct procedure for waste disposal. Post notices stating these practices in the office trailer, on a weatherproof bulletin board, or other accessible location acceptable to the Engineer. The Contractor shall be responsible for seeing that these procedures are followed. Submit the Solid Waste Disclosure Form for Construction Sites to the Department of Health Solid and Hazardous Waste Branch and to the Engineer within 21 calendar days of contract execution. Provide a copy of all the disposal receipts from the facility permitted by the Department of Health to receive solid waste to the Engineer monthly. Do not transport, temporarily store, or process solid waste generated on the project site to any other unpermitted site.
- Hazardous Waste. Dispose all hazardous waste materials in the manner specified by local or State regulations and by the manufacturer. The Contractor's site personnel shall be instructed in these practices and shall be responsible for seeing that these practices are followed.
- Sanitary Waste. Collect all sanitary waste from the portable units a minimum of once per week, or as required. Position sanitary facilities where they are secure and will not be tipped over or knocked down.

C. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES:

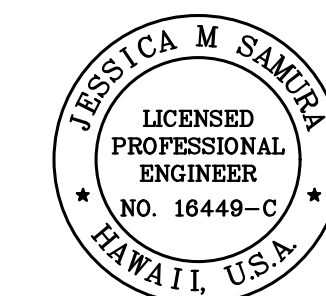
- For projects with an NPDES Permit for Construction Activities, inspect at the following intervals. For construction areas discharging to nutrient or sediment impaired waters, inspect all control measures at least once each week and within 24 hours of any rainfall event of 0.25 inches or greater within a 24 hour period. For construction areas discharging to waters not impaired for nutrient or sediments, inspect all control measure weekly. Inspections are only required during the project's normal working hours. The discharge point water classification may be found in the SWPPP.
- For projects without an NPDES Permit for Construction Activities, inspect all control measures weekly.
- Maintain all erosion and sediment control measures in good

working order. If repair is necessary, initiate repair immediately and complete by the close of the next work day if the problem does not require significant repair or replacement, or if the problem can be corrected through routine maintenance. When installation of a new erosion or sediment control or a significant repair is needed, install the new or modified control or complete the repair no later than 7 calendar days from the time of discovery. "Immediately" means the Contractor shall take all reasonable measures to minimize or prevent discharge of pollutants until a permanent solution is installed and made operational. If a problem is identified at a time in the day in which it is too late to initiate repair, initiation of repair shall begin on the following work day.

- Remove built-up sediment from silt fence when it has reached one-third the height of the fence. Remove sediment from other perimeter sediment control devices when it has reached one-half the height of the device.
- Inspect silt screen or fence for depth of sediment, tears, to verify that the fabric is securely attached to the fence posts or concrete slab and to verify that the fence posts are firmly in the ground. Inspect and verify the bottom of the silt screen is buried a minimum of 6 inches below the existing ground.
- Inspect temporary and permanent seeding and planting for bare spots, washouts and healthy growth.
- Complete and submit to the Engineer a maintenance inspection report within 24 hours after each inspection.
- Provide a stabilized construction entrance at all points of exit onto paved roads to reduce vehicle tracking of sediments. Include stabilized construction entrance in the Water Pollution, Dust, and Erosion Control submittals. Minimum length should be 50 feet. Minimum width should be 30 feet. Minimum depth should be 12 inches or as recommended by the soils engineer and underlain with geo-textile fabric. If minimum dimensions cannot be met, provide other stabilization techniques that remove sediment prior to exit. Clean the paved street adjacent to the site entrance daily or as required to remove any excess mud, cold-planned materials, dirt or rock tracked from the site. Do not hose down the street without containing or vacuuming wash water. Cover dump trucks hauling material from the construction site with a tarpaulin. Remove sediment tracked onto the street, sidewalk, or other paved area by the end of the day in which the track-out occurs.
- Include designated Concrete Washout Area(s) in the Water Pollution, Dust, and Erosion Control submittals.
- Submit the name of a specific individual designated responsible for inspections, maintenance and repair activities and filling out the inspection and maintenance report.

- Personnel selected for the inspection and maintenance responsibilities shall receive training from the Contractor. They shall be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order.
- Contain, remove, and dispose slurry generated from saw cutting of pavement in accordance with approved BMP practices. Do not allow discharge into the drainage system or State waters.
- For projects with an NPDES Permit for Construction Activities, immediately initiate stabilizing exposed soil areas upon completion of earth-disturbing activities for areas where earth-disturbing activities have permanently or temporarily ceased. Earth-disturbing activities have permanently ceased when clearing and excavation within any area of the construction site that will not include permanent structures has been completed. Earth-disturbing activities have temporarily ceased when clearing, grading, and excavation within any area of the site that will not include permanent structures will not resume (i.e., the land will be idle) for a period of 14 or more calendar days, but such activities will resume in the future. For construction areas discharging into waters not impaired for nutrients sediments, complete initial stabilization within 14 calendar days after the temporary or permanent cessation of earth-disturbing activities. For construction areas discharging into nutrient or sediment impaired waters, complete initial stabilization within 7 calendar days after the temporary or permanent cessation of earth-disturbing activities. Classification of water at the discharge point may be found in the SWPPP.
- For projects without an NPDES Permit for Construction Activities, complete initial stabilization within 14 calendar days after the temporary or permanent cessation of earth-disturbing activities.

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 Signature: *Jessica M. Samura*
 EXPIRATION DATE OF LICENSE: 4/30/28

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

WATER POLLUTION & EROSION CONTROL NOTES

Freeway Management System, Phase 4
Federal-Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. 1 OF 2 SHEETS

WATER POLLUTION AND EROSION CONTROL NOTES (CONTINUED):

FED. ROAD DIST. NO.	STATE	FEDERAL-AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	6	111

D. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES:

1. Materials Pollution Prevention Plan

a. Applicable materials or substances listed below are expected to be present onsite during construction. Other materials and substances not listed below shall be added to the inventory.

Concrete	Cleaning Solvents
Detergents	Wood
Paints (enamel and latex)	Masonry Block
Metal Studs	Herbicides and Pesticides
Tar	Curing Compounds
Fertilizers	Adhesives
Petroleum Based Products	

- b. Use Material Management Practices to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff. Make an effort to store only enough product as is required to do the job.
- c. Store all materials stored onsite in a neat, orderly manner in their appropriate containers and if possible under a roof or other enclosure.
- d. Keep products in their original containers with the original manufacturer's label.
- e. Do not mix substances with one another unless recommended by the manufacturer.
- f. Whenever possible, use a product up completely before disposing of the container.
- g. Follow manufacturer's recommendations for proper use and disposal.
- h. Conduct a daily inspection to ensure proper use and disposal of materials onsite.

2. Hazardous Material Pollution Prevention Plan

- a. Keep products in original containers unless they are not resealable.
- b. Retain original labels and Safety Data Sheets (SDS), formerly Material Safety Data Sheets (MSDS).
- c. Dispose of surplus products according to manufacturers' instructions and local and State regulations.

3. Onsite and Offsite Product Specific Plan

The following product specific practices shall be followed onsite:

- a. Petroleum Based Products:
Monitor all onsite vehicles for leaks and perform regular preventive maintenance to reduce the chance of leakage. Store petroleum products in tightly sealed containers which are clearly labeled. Apply asphalt substances used onsite according to the manufacturer's recommendation.
- b. Fertilizers:
Apply fertilizers used only in the minimum amounts recommended by the manufacturer and federal, state, and local requirements. Avoid applying just before a heavy rain event. Apply at the appropriate time of year for the location, and preferably timed to coincide as closely as possible to the period of maximum vegetation uptake and growth. Once applied, work fertilizer into the soil to limit exposure to storm water. Do not apply to storm conveyance channels with flowing water. Storage shall be in a covered

shed or in an area where fertilizer will not come into contact with precipitation or stormwater. Transfer the contents of any partially used bags of fertilizer to a sealable plastic bin to avoid spills.

- c. Paints:
Seal and store all containers when not required for use. Do not discharge excess paint to the drainage system, sanitary sewer system, or State waters. Dispose properly according to manufacturers' instructions and State and local regulations.
- d. Concrete Trucks:
Washout or discharge concrete truck drum wash water only at a designated site as far as practicable from storm drain inlets or State waters. Do not discharge water in the drainage system or State waters. Disposal by percolation is prohibited. Clean disposal site as required or as requested by the Engineer.

4. Spill Control Plan

- a. Post a spill prevention plan to include measures to prevent and clean up each spill.
- b. The Contractor shall be the spill prevention and cleanup coordinator. Designate at least three site personnel who shall receive spill prevention and cleanup training. These individuals shall each become responsible for a particular phase of prevention and cleanup. Post the names of responsible spill personnel in the material storage area on a weatherproof bulletin board or other accessible location acceptable to the Engineer and in the office trailer onsite.
- c. Clearly post manufacturers' recommended methods for spill cleanup. Make site personnel aware of the procedures and the location of the information and cleanup supplies.
- d. Keep ample materials and equipment necessary for spill cleanup in the material storage area onsite.
- e. Clean up all spills immediately after discovery.
- f. Keep the spill area well ventilated. Personnel shall wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- g. Report spills of toxic hazardous material to the appropriate State or local government agency, regardless of the size. Where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302 occurs during a 24-hour period, the Contractor shall notify the Engineer as soon as the Contractor has knowledge of the discharge. The Engineer will notify the National Response Center (NRC) at (800) 424-8802, the Clean Water Branch during regular business hours at 586-4309, and the Hawaii State Hospital Operator at 247-2191 and the Clean Water Branch (DOH-CWB) via email at cleanwaterbranch@doh.hawaii.gov during non-business hours immediately. The Contractor shall also provide to the Engineer, within 7 calendar days of knowledge of the release, a description of the release, the circumstances leading to the release, and the date of the release. The Engineer will provide this information to the DOH-CWB. The Engineer will provide information to the NRC if requested.

E. PERMIT REQUIREMENTS:

1. A National Pollutant Discharge Elimination System (NPDES) Permit for Construction Activities of one acre or more of disturbed area is required for this project. If the Contractor requires extra land disturbance, including staging and storage areas, that is not covered by the NPDES Permit obtained by the State, the Contractor shall be responsible for obtaining the required NPDES Construction Activities Permit to cover this additional disturbed area. See Hawaii Administrative Rules Chapter 11-55, Appendix C for definition of land disturbance. The Contractor's attention is directed to the applicable NPDES Permit documents on the bid package compact disc.
2. Comply with all applicable State and Federal Permit conditions. Permits may include, but not limited to the following:
- a. NPDES Permit for Construction Activities
 - b. NPDES Permit for Construction Dewatering
 - c. NPDES Permit for Hydrotesting Waters
 - d. Water Quality Certification
 - e. Stream Channel Alteration Permit
 - f. Section 404 Army Corps of Engineer Permit
 - g. Hawaii Revised Statutes Chapter 195D
 - h. Hawaii Revised Statutes Chapter 6E
 - i. Hawaii Revised Statutes Chapter 343

F. SITE-SPECIFIC BMP REQUIREMENTS:

Each BMP below is referenced to the corresponding section of the current HDOT Construction Best Management Practices Field Manual and appropriate Supplemental Sheets. The Manual may be obtained from the HDOT Statewide Stormwater Management Program Website at <http://www.stormwaterhawaii.com/resources/contractors-and-consultants/> under Construction Best Management Practices Field Manual. Supplemental BMP sheets are located at <http://www.stormwaterhawaii.com/resources/contractors-and-consultants/storm-water-pollution-prevention-plan-swppp/> under Concrete Curing and Irrigation Water.

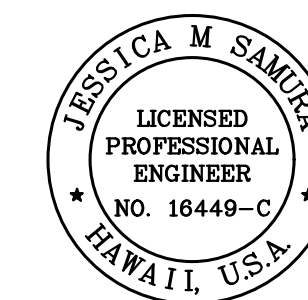
The requirements for Water Pollution, Dust, and Erosion Control submittals are included in Section 209 of the Hawaii Standard Specifications for Road and Bridge Construction dated 2005 and applicable Special Provisions. A list of pollutant sources and corresponding BMP used to mitigate the pollutants are included in Section 209 of the Special Provisions under Appendix A.

Follow the requirements below:

1. Protect all Drainage Inlets receiving runoff from disturbed areas (SC-1).
2. Contain on-site runoff using Perimeter Sediment Controls
- a. SC-7 Silt Fence or Filter Fabric Fence
 - b. SC-2 Vegetated Filter Strips and Buffers
 - c. SC-6 Compost Filter Berm/Sock
 - d. SC-8 Sandbag Barrier
 - e. SC-9 Brush or Rock Filter

3. Control offsite runoff from entering construction area
- c. EC-3 Run-On Diversion
 - d. SC-6 Earth Dike, Swales, and Ditches
4. Incorporate applicable Site Management BMP
- a. SM-1 Employee Training
 - b. SM-2 Material Storage and Handling
 - c. SM-3 Stockpile Management
 - d. SM-6 Solid Waste Management
 - e. SM-7 Sanitary Waste Management
 - f. SM-9 Hazardous Materials and Waste Management
 - g. SM-10 Spill Prevention and Control
 - h. SM-11 Vehicle and Equipment Cleaning
 - i. SM-12 Vehicle and Equipment Maintenance
 - j. SM-13 Vehicle and Equipment Refueling
 - k. SM-14 Scheduling
 - l. SM-15 Location of Potential Sources of Sediment
 - m. SM-16 Staging Area
 - n. SM-17 Preservation of Existing Vegetation
 - o. SM-19 Dust Control
5. Contain pollutants within the Construction Staging/Storage Area BMP with applicable Perimeter Sediment Controls and Site Management BMP. Include a Stabilized Construction Entrance/Exit (SC-11) for all areas which exit onto a paved street. Restrict vehicle access to these points.
6. Manage Concrete Waste including installing a Concrete Washout Area (SM-4) and properly disposing of Concrete Curing Water (California Stormwater BMP Handbook NS-12 Concrete Curing).
7. Remove saw cut slurry and hydrodemolition water from the site by vacuuming. Provide storm drain protection and/or perimeter sediment controls during saw cutting and hydrodemolition work.

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Jessica M. Samaha
SIGNATURE
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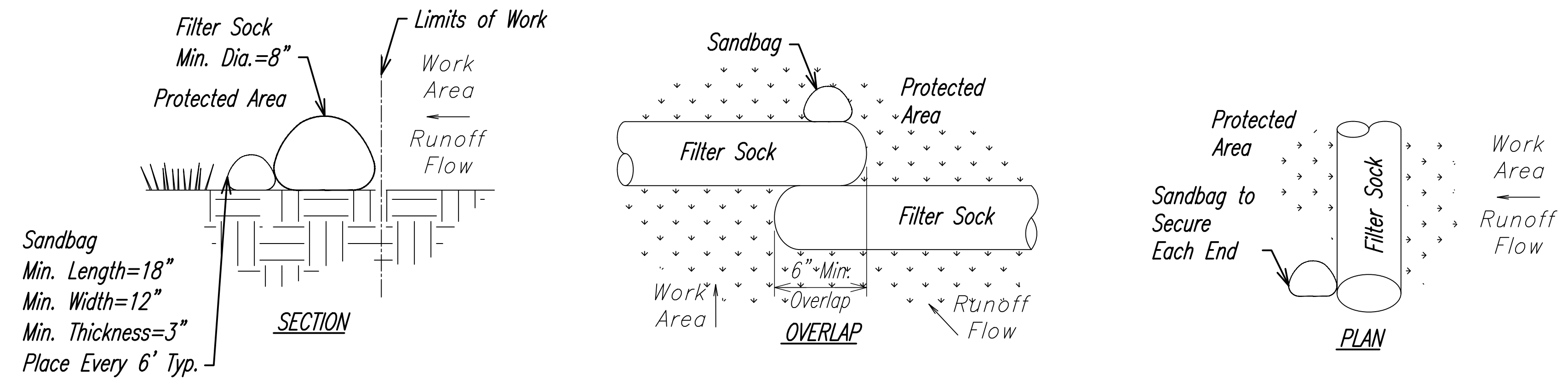
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER POLLUTION & EROSION
CONTROL NOTES

Freeway Management System, Phase 4
Federal-Aid Project No. NH-0300(176)R

Scale: As Indicated Date: April 2026

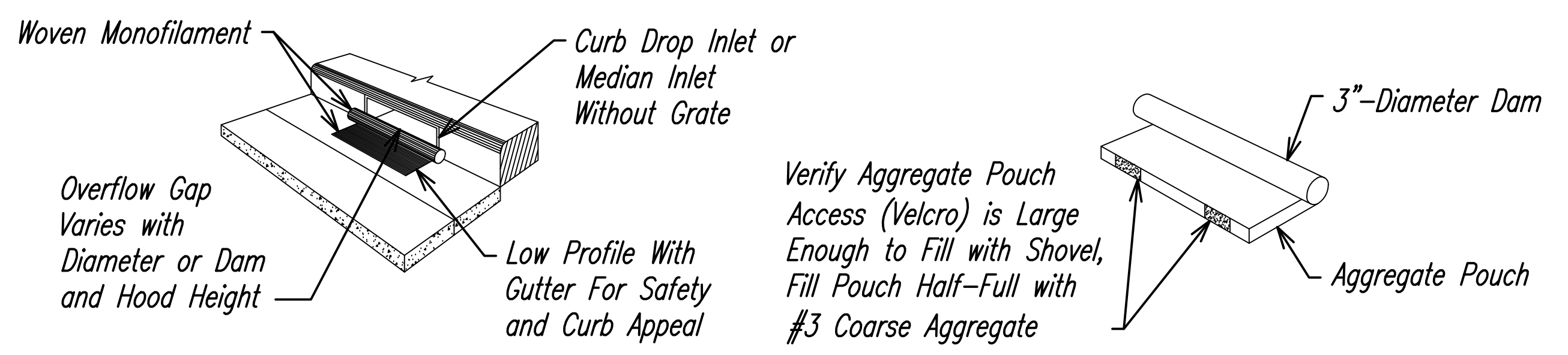
FED. ROAD DIST. NO.	STATE	FEDERAL-AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	7	111



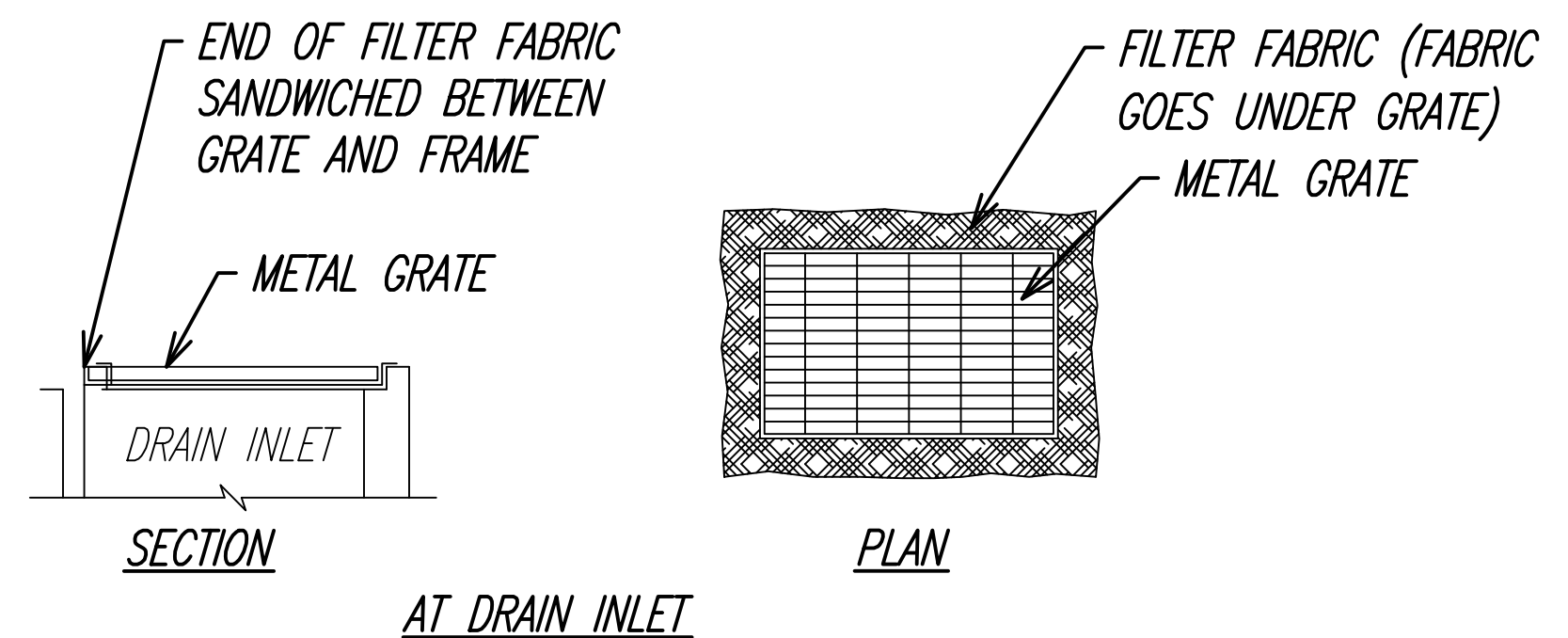
FILTER SOCK (1)
NOT TO SCALE 9, 10, 11, 12, 7

COMPOST FILTER SOCK NOTES:

- Installation:
 - Installation shall be done according to the Manufacturer's recommendations.
 - Assemble by tying a knot at one one of the mesh sock, filling the sock with compost, and knotting the other end of the sock. A pneumatic blower may be used to fill the sock with compost.
 - For multi-sock use, place socks end-to-end and interlock the ends, or per manufacturer's recommended procedures, whichever is more stringent.
 - Anchor filter socks to ground; stakes shall be installed per the Manufacturer's recommendations. Where staking is not possible, heavy concrete blocks shall be used behind the filter sock for stabilization during rainfall events.
 - Turn ends of filter sock up slope to prevent flow around the ends.
- Material for compost berm may be left at the site and used as a soil amendment.
- Inspection & Maintenance:
 - Contractor shall inspect the filter sock(s) weekly during dry periods, daily during periods of prolonged rainfall, and within 24 hours of any rainfall event of 0.25 inch or greater that occurs within a 24-hour period.
 - The Contractor shall remove all accumulated sediment and debris from vicinity of filter sock(s) after each storm event. Remove sediment which has accumulated to within 1/3 of the berm height.
- If a severe storm is expected, remove inlet protection devices to prevent flooding on surrounding streets.

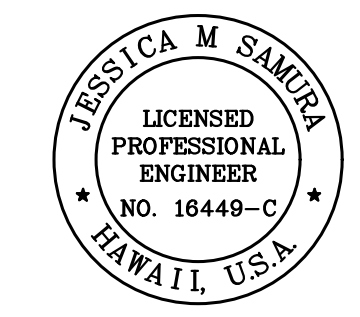


SEDIMENT FILTER FOR CATCH BASINS (2)
NOT TO SCALE 8, 7



SEDIMENT CONTROL FILTER DETAIL (3)
NOT TO SCALE 9, 10, 12, 7

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 Signature: *Jessica M. Samura*
 Date: 4/30/28
 EXPIRATION DATE OF LICENSE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

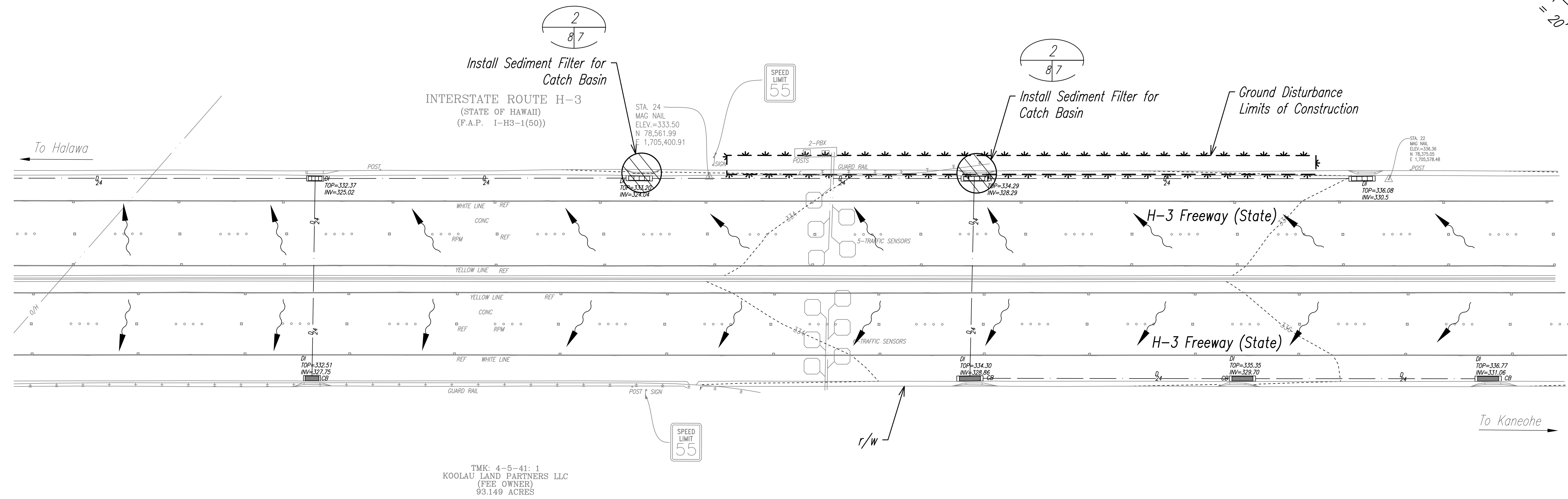
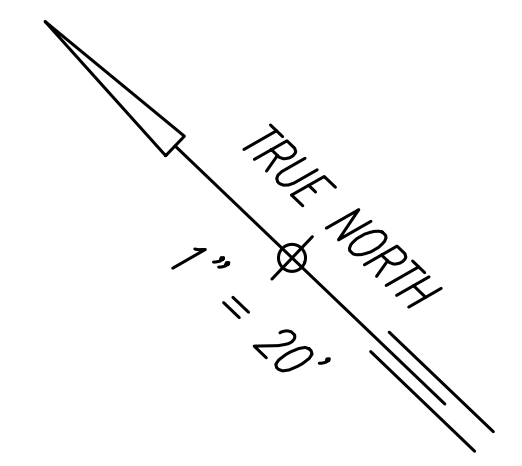
EROSION & SEDIMENT CONTROL DETAILS

*Freeway Management System, Phase 4
 Federal-Aid Project No. NH-0300(176)R*

Scale: As Indicated Date: April 2026

SHEET No. 1 OF 1 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL-AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	8	111



TMK: 4-5-41: 1
 KOOLAU LAND PARTNERS LLC
 (FEE OWNER)
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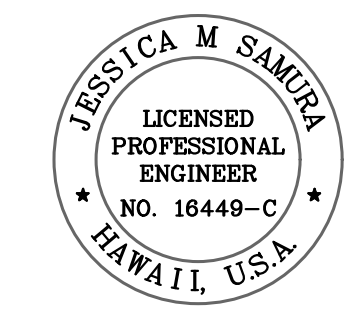
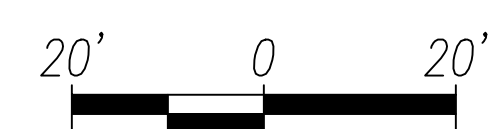
NOTE:

Sediment and Erosion Control BMP measures shown in the Contract Documents are minimum BMPs requirements and do not constitute an acceptable and/or complete Sediment Control Plan. The Contractor shall incorporate additional BMPs based upon their means and methods considering site conditions and construction sequence in accordance with the Contract Documents including applicable permit document requirements. Cost shall be included in Pay Item 209.0100, Installation, Maintenance, Monitoring, and Removal of BMP.

LEGEND

- Direction of Surface Runoff
- Limits of Construction with Ground Disturbance
- Filter Sock
- Sediment Filter for Catch Basin

H-3 FREEWAY - CCTV 22
 Scale: 1" = 20'



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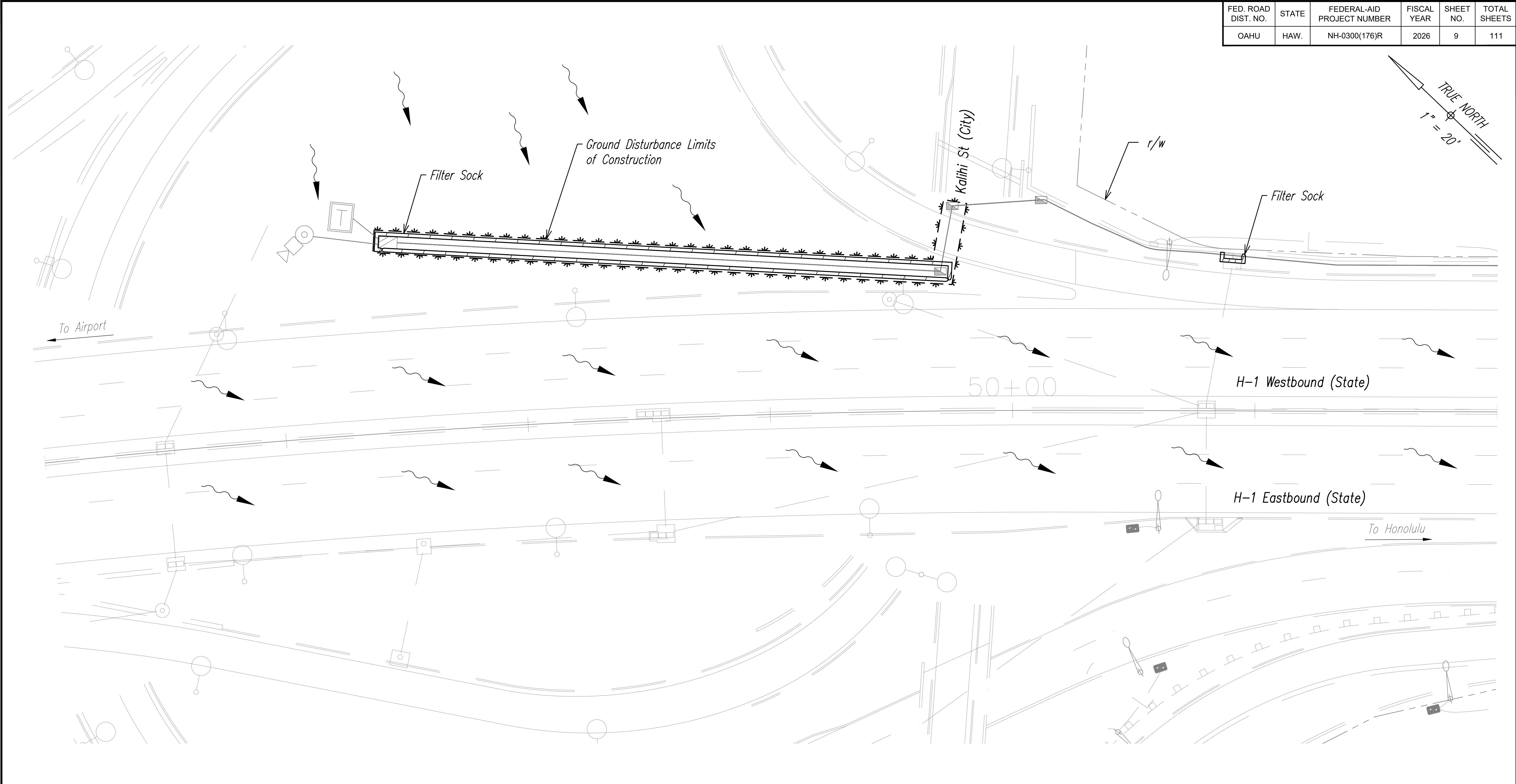
STATE OF HAWAII
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EROSION & SEDIMENT CONTROL PLAN
H-3 FREEWAY
CCTV 22

Freeway Management System, Phase 4
 Federal-Aid Project No. NH-0300(176)R
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SHEET No. 1 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL-AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	9	111



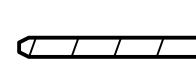
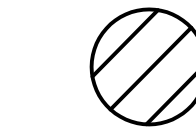


ORIGINAL PLAN	DATE
NO. _____	_____
DESIGNED BY	DATE
CHECKED BY	_____
QUANTITIES BY	_____
TRACED BY	_____
DRAWN BY	_____
SURVEY PLOTTED BY	_____

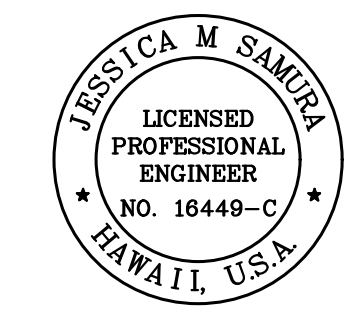
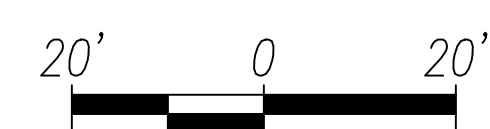
NOTE:

Sediment and Erosion Control BMP measures shown in the Contract Documents are minimum BMPs requirements and do not constitute an acceptable and/or complete Sediment Control Plan. The Contractor shall incorporate additional BMPs based upon their means and methods considering site conditions and construction sequence in accordance with the Contract Documents including applicable permit document requirements. Cost shall be included in Pay Item 209.0100, Installation, Maintenance, Monitoring, and Removal of BMP.

LEGEND

-  Direction of Surface Runoff
-  Limits of Construction with Ground Disturbance
-  Filter Sock
-  Sediment Filter for Catch Basin

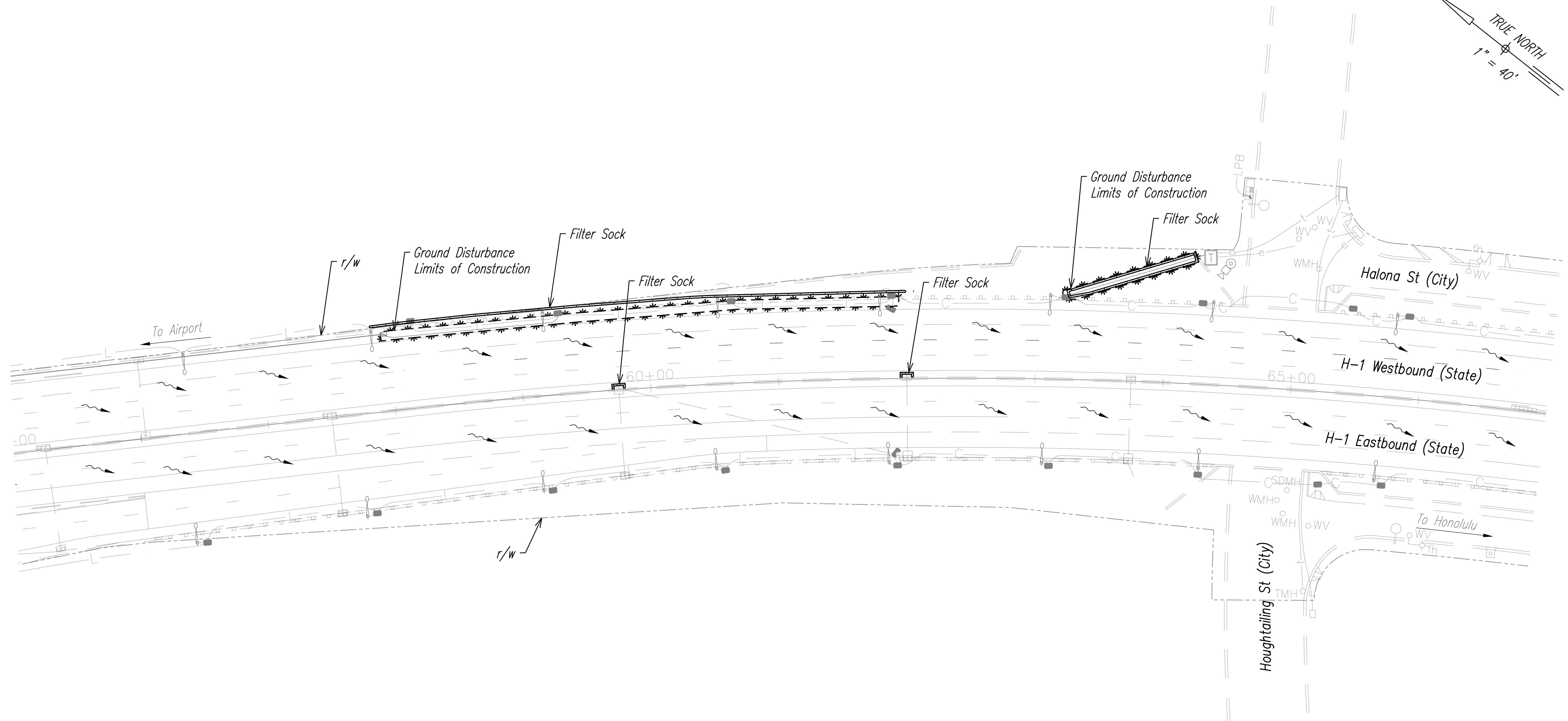
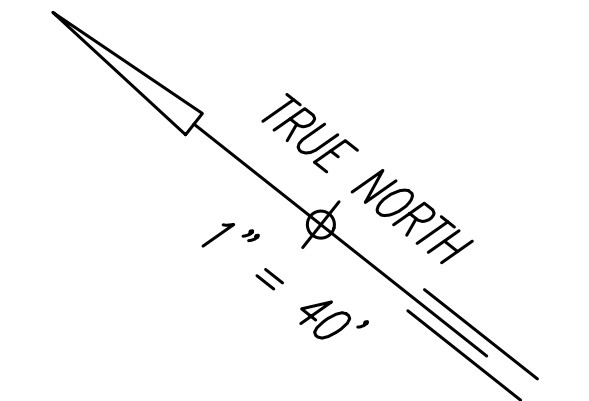
H1 FREEWAY - 46+00 TO STA 52+00
Scale: 1" = 20'



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
 Signature: *Jessica M. Samaha*
 Date: 4/30/26
 EXPIRATION DATE OF LICENSE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
EROSION & SEDIMENT CONTROL PLAN
 H-1 FREEWAY
 STA 46+00 TO STA 52+00
 Freeway Management System, Phase 4
 Federal-Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026



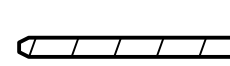
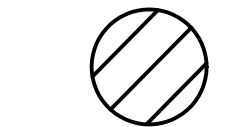
FED. ROAD DIST. NO.	STATE	FEDERAL-AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	10	111



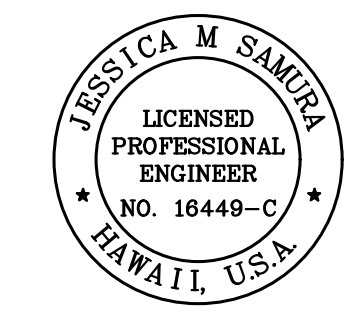
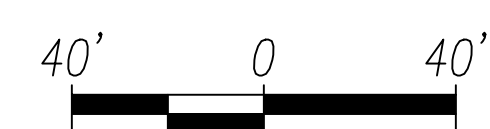
NOTE:

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LEGEND

-  Direction of Surface Runoff
-  Limits of Construction with Ground Disturbance
-  Filter Sock
-  Sediment Filter for Catch Basin

H1 FREEWAY - STA 55+00 TO STA 67+00
Scale: 1" = 40'



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Jessica M. Samaha
SIGNATURE 4/30/28
EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EROSION & SEDIMENT CONTROL PLAN
H1 FREEWAY
STA 55+00 TO STA 67+00
Freeway Management System, Phase 4
Federal-Aid Project No. NH-0300(176)R
Scale: As Indicated Date: April 2026

SHEET No. 3 OF 3 SHEETS

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	11	111

INTELLIGENT TRANSPORTATION SYSTEMS NOTES

CONSTRUCTION NOTES

ABBREVIATIONS

LEGEND

- Conduits And Pullbox Locations As Shown On The Plans Are Schematic. They May Be Modified By The Contractor With The Approval Of The HDOT Representative When Signal Work Is Within HDOT R/W.
- All Work For The Installation Or Modification Of The ITS And Traffic Signal Systems Shall Conform To The Latest Revisions Of The "Hawaii Standard Specifications For Road And Bridge Construction" (2005) And The "Standard Plans" (2008) Of The Department Of Transportation, Highways Division And As Shown On These Drawings.
- Fiber Optic Cable Splicing Shall Be Completed Inside Cabinets With Cable Slack Provided Per Contract Items.
- While Modifying The Existing Systems, The Contractor Shall Keep The Existing System Operational According To The Contract Specifications. The Systems Shall Be Kept Operational During Construction. Any Relocation Required Shall Be Approved By The Department And Paid For By The Contractor.
- The Contractor Shall Be Responsible For Any Damages To The Existing Facilities Including But Not Limited To The Fiber Optic Cable System. Any And All Damages To These Facilities Shall Be Repaired By The Contractor At Their Cost In Accordance With The Requirements Of The Department Of Transportation Services.
- Access To The Department Of Transportation Services Joint Traffic Management Center (JTMC) For Integration Of CCTV Systems Will Be Made Available Pending HDOT Approval Of Qualified Personnel. Request For Access And Statement Of Qualifications For Proposed Personnel Directly Involved With This Work Shall Be Made To HDOT No Later Than 4 Weeks Prior To Commencement Of Work.
 - Since The HDOT CCTV System Utilizes Unique Equipment/Software, The Contractor Shall Submit 45 Days In Advance For HDOT Approval, The Person's Name, Qualifications And Resume That The Integrator Will Be Utilizing To Program The CCTV Cameras. Approval Will Be Granted Only If The Person Shows Past Experience Working On The Same Systems/Software That Are Utilized By HDOT.
 - In Accordance With HRS §846-2.7(B)(37), A Fingerprint-Based State And National Criminal History Record Check (CHRC) Will Be Required For All Personnel Requiring Unescorted Access To The Secured Areas And Equipment Within The Joint Traffic Management Center (JTMC). Employees Must Pass The CHRC In Order To Be Granted Unescorted Access.
 - The Contractor Shall Be Responsible For Obtaining A State And National Fingerprint-Based CHRC For Each Integrator Who Requires Unescorted Access In Order To Install CCTV Equipment Within The JTMC. Employees That Do Not Pass The CHRC Shall Not Be Granted Unescorted Access Within The JTMC. The Contractor Shall Be Responsible For All Cost To Obtain The CHRC.
 - CHRC Report Shall Be Sent To HDOT For Evaluation And Determination Of Clearance. Include A Statement That A CHRC Was Conducted And The Date It Was Done. The Statement Shall Be Signed By The Contractor's Human Resources Manager Or Designee.
 - Should The Contractor's Employees Not Obtain The CHRC, Access To The JTMC Maybe Limited Due To Available Staff To Escort The Contractor.
- All Existing CCTV Camera System Equipment In Existing Cabinets Which Is Not Required For Permanent Condition Operations Shall Be Salvaged And Returned To The Department.

- Locations Of Existing Underground Structures And Utilities Such As Pipelines, Conduits, Cables, Etc., Shown On Plans Are Approximate Only Unless Otherwise Noted. It Is Not The Intent Of These Plans To Show The Exact Location Of All Underground Utilities And Structures. It Is The Responsibility Of The Contractor To Verify The Locations Of All Existing Utilities With The Respective Owners. Existing Utilities Damaged By The Contractor Shall Be Repaired By The Contractor At Their Own Cost.
- The Contractor Shall Verify And Check All Dimensions And Details Shown On The Drawings Prior To The Start Of Construction. Any Discrepancy Shall Be Immediately Brought To The Attention Of The HDOT Representative When Working In HDOT R/W.
- The Contractor Shall Notify All Agencies To Verify, Tone, And Locate Their Existing Utilities Within The Project Area Prior To Excavating. The Contractor Shall Coordinate All Work.
- Maintenance Of Traffic Through The Construction Area Shall Be In Accordance With Part VI Of The "Manual On Uniform Traffic Control Devices For Streets And Highways, 11th Edition", Federal Highway Administration, As Amended And As Specified In The Special Provisions. The Contractor Shall Furnish And Maintain Adequate Barricades, Blinkers, Construction Signs, Etc., For The Safety Of The Motoring Public.
- At The End Of Each Day's Work, The Contractor Shall Remove All Equipment And Other Obstructions To Permit Free And Safe Passage Of Public Traffic.
- The Contractor Shall Install All ITS Devices As Specified Within The Plans And In Accordance With The Manufacturer's Recommendations.
- All Existing Camera Cables That Are Not Utilized By The Proposed Permanent IP CCTV Camera System Shall Be Removed From All Systems Conduits As Part Of The Work.
- The Contractor Shall Furnish All Connectors, Labeling Systems, And Consumables As An Appurtenance To This Work.
- All ITS Equipment Shall Be Completely Wired In The Cabinet And Shall Work As Called For In All The Plans.
- The Contractor Shall Notify The Hawaii One Call Center (HOCC) At +1(866)-423-7287 For Excavation Or Drilling At Least Five (5) Days, But No More Than Twenty-Eight (28) Calendar Days Prior To Commencing Excavation Or Drilling Work In Accordance With Hawaii Revised Statutes Chapter 269E. The Contractor Shall Provide The HOCC, A Description Of The Site, That Includes The County And Address Or Description Of Where The Excavation Or Drilling Will Take Place, Including But Not Limited To The Nearest Intersecting Street, Side Street, Or Other Tie-In Measures As Needed. The Contractor Shall Not Begin Excavation Or Drilling Operations Without Prior Clearances From The HOCC.
- For Construction Activities That Will Be Conducted Over Live Traffic, The Contractor Will Check With The State And City For Proper Safety Procedures.
- Any Planned Disruption To The Fiber Communications Will Need To Be Communicated To HDOT, Five (5) Working Days In Advance And Downtime Shall Be Limited To Off-Peak (8:30AM-3:30PM) Hours Monday To Friday, Excluding City/State Holidays. Point Of Contacts Shall Be: HDOT - Miles Ueno (Miles.Ueno@Hawaii.Gov) & Neal Honma (Neal.K.Honma@Hawaii.Gov)
- Contact Tuan Nguyen (808-625-8378) (tuan.nguyen1@charter.com) 30 Days Prior To Any Interruption Of Existing Spectrum Cable Fiber Connections as Referenced in the Plans.
- Before Any Construction Efforts Begin, The Contractor Shall Proof All Existing Underground Communications And Power Conduits That Will Have Cabling Modifications, As Identified In The Plans, And Submit A Conduit Investigation Report For Approval By HDOT. The Report Will Confirm Which Conduits Are: Continuous And That Can Accept New Cabling; Conduits That Are Not Continuous And Cannot Accept New Cabling; And Conduit Capacity For All Identified Conduits.
- With The Approval Of The HDOT Representative, The Contractor May Be Required To Repair Or Replace Conduits That Do Not Have The Capability To Have New Cabling Installed.
- The Contractor Is Responsible To Repair, At Their Own Cost, Any Existing Cabling (Signals, Power, Communication/Fiber, Or Otherwise) Or Conduit Damaged During The Installation Of New Cables That Renders Any Portion Of The HDOT Systems To Be Either Temporarily Or Permanently Disabled.
- Comply With HECO And Other Utility Company Requirements For All Electrical Services Work Indicated In The Project Plans.
- Coordinate With The Representative For All Additional Splicing Requirements To Establish Complete IP Communication Connections To JTMC Noted In The Plans. Prior To Starting Work, Verify Communications Assignments And Splicing Work With HDOT For All Proposed Sites.
- Sediment And Erosion Control Measures Shown in the Contract Documents are Minimum BMP Requirements and do not constitute an acceptable and/or complete sediment and erosion control plan. The Contractor shall incorporate additional BMPs based upon their means and methods considering site conditions and construction sequence in accordance with the contract documents including applicable permit documentation requirements. Costs shall be included in pay item 209.0100, installation, maintenance, monitoring and removal of BMP.

AC	Alternating Current
Ant	Antenna
BL	Underground Baseline
BMP	Best Management Practice
Cat 6	Category 6
Cct	Circuit
CCH	City and County of Honolulu
CCTV	Closed-Circuit Television
Coax	Coaxial
CODEC	Coder-Decoder
COMA	Code Division Multiple Access
CLSM	Controlled Low-Strength Material
Comm	Communications
Comp	Composite Cable
Ctrl	Control
c/w	Complete With
DC	Direct Current
Dr	Drive
DTS	Department of Transportation Service
EA	Each
EB	Eastbound
EC	Encoder
EL	East Lane
EVP	Emergency Vehicle Preemption
EXIST	Existing
FDU	Fiber Distribution Unit
Flex	Flexible Conduit
FOC	Fiber Optic Cable
Gnd	Ground
GPS	Global Positioning System
GRS	Galvanized Rigid Steel
HDOT	Hawaii Department of Transportation
HECO	Hawaiian Electric Co.
Hwy	Highway
IP	Internet Protocol
JB	Junction Box
LAN	Local Area Network
LED	Light Emitting Diode
LPR	License Plate Reader
MMFO	Multi-mode Fiber Optic
NB	Northbound
NIC	Not in Contract
NEC	National Electrical Code
NTS	Not to Scale
N/C	Normally Closed
N/O	Normally Open
O.C.	On Center
OH	Overhead
PL	Place
POE	Power Over Ethernet
PTZ	Pan Tilt Zoom
PVC	Polyvinyl Chloride
PVH	Programmed Visibility Hec
Pwr	Power
ROW	Right of Way
SB	Southbound
SM	Single-mode
SMFO	Single-mode Fiber Optic
S/S	Stainless Steel
St	Street
STP	Shielded Twisted Pair
STR	Strand
Stat	thermostat
TB	Terminal Block
TMC	Traffic Management Center
Typ	Typical
WL	West Lane
WB	Westbound
w/	With
UG	Underground
UPS	Uninterrupted Power Supply
VLAN	Virtual Local Area Network
XHHW	Conductor Jacket

Existing	Proposed	Description
		Communications Pullbox
		Power Pullbox
		Surface Mounted Junction Box
		Hub Cabinet
		Traffic Cabinet
		CCTV Control or ITS Device Cabinet
		ITS Communications Conduits
		Power and Lighting Conduit
		CCTV Camera
		Meter Pedestal
		Wireless Access Point
		Wireless Communication Link
		Sign Bridge
		Cantilever Structure
		Tunnel Gantry Structure
		Guardrail
		Power Source
		Light Pole With Luminaire Arm
		Camera Pole
		Pole-Mounted Enclosure
		Lighting Substation Cabinet

ORIGINAL PLAN	DATE
NO.	
DESIGNED BY	
CHECKED BY	
QUANTITIES BY	
TRACED BY	
DRAWN BY	
SURVEY PLOTTED BY	



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
 Signature: *David Palley*
 EXPIRATION DATE OF LICENSE: 4/20/2028

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS
 GENERAL NOTES, ABBREVIATIONS, AND LEGEND

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	12	111

CONSTRUCTION NOTES

- 1 Install New PTZ CCTV Camera on Existing Camera Pole Per Sheet C-53
- 2 Install New PTZ CCTV Camera on Existing Tunnel Gantry Per Sheet C-54
- 3 Install New PTZ CCTV Camera on Existing Sign Bridge Per Sheet C-54
- 4 Install New PTZ CCTV Camera New Wall Mount Attachment Per Sheet C-54
- 5 Install New PTZ CCTV Camera on Existing Light Pole Per Sheet C-53
- 6 Install New Fixed CCTV Camera on New Wall Mount Per Sheet C-54
- 7 Install New Layer 2 Ethernet Switch
- 8 Install New Supplementary Ethernet Switch Module(s)
- 9 Reconnect and Recalibrate Existing Wireless Network Link
- 10 Install New 332A Cabinet Assembly
- 11 Install New Fiber Optic Patch Panel - 12 Port
- 12 Install New Fiber Optic Patch Panel - 24 Port
- 13 Install New Fiber Optic Patch Panel - 144 Port
- 14 Install Fiber Optic Jumper Cables
- 15 Install New Type A Traffic Signal Pull Box
- 16 Install New Stainless Steel Surface Mounted Pull Box
- 17 Install New NEMA 3R Enclosure
- 18 Install New NEMA 340 Hub Cabinet Enclosure

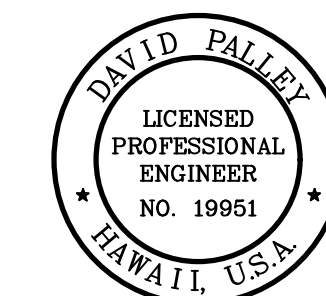
CABLE NOTES

- 1 Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- 2 Install New 72-Strand SMFO Cable in New Fabric Innerduct
- 3 Install New 12-Strand SMFO Cable in New Fabric Innerduct
- 4 Install New CAT6E or Equivalent Cable in New Fabric Innerduct

CONDUIT NOTES

- 1 Install New Cable and Innerduct In Existing Conduit
- 2 Install 3" Conduit In Barrier
- 3 Install 3" Conduit In Earth
- 4 Install 3" RGS Structure-Mounted Conduit
- 5 Install Aerial Camera Control Cable
- 6 Directionally Bore and Install 3" Conduit

ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	



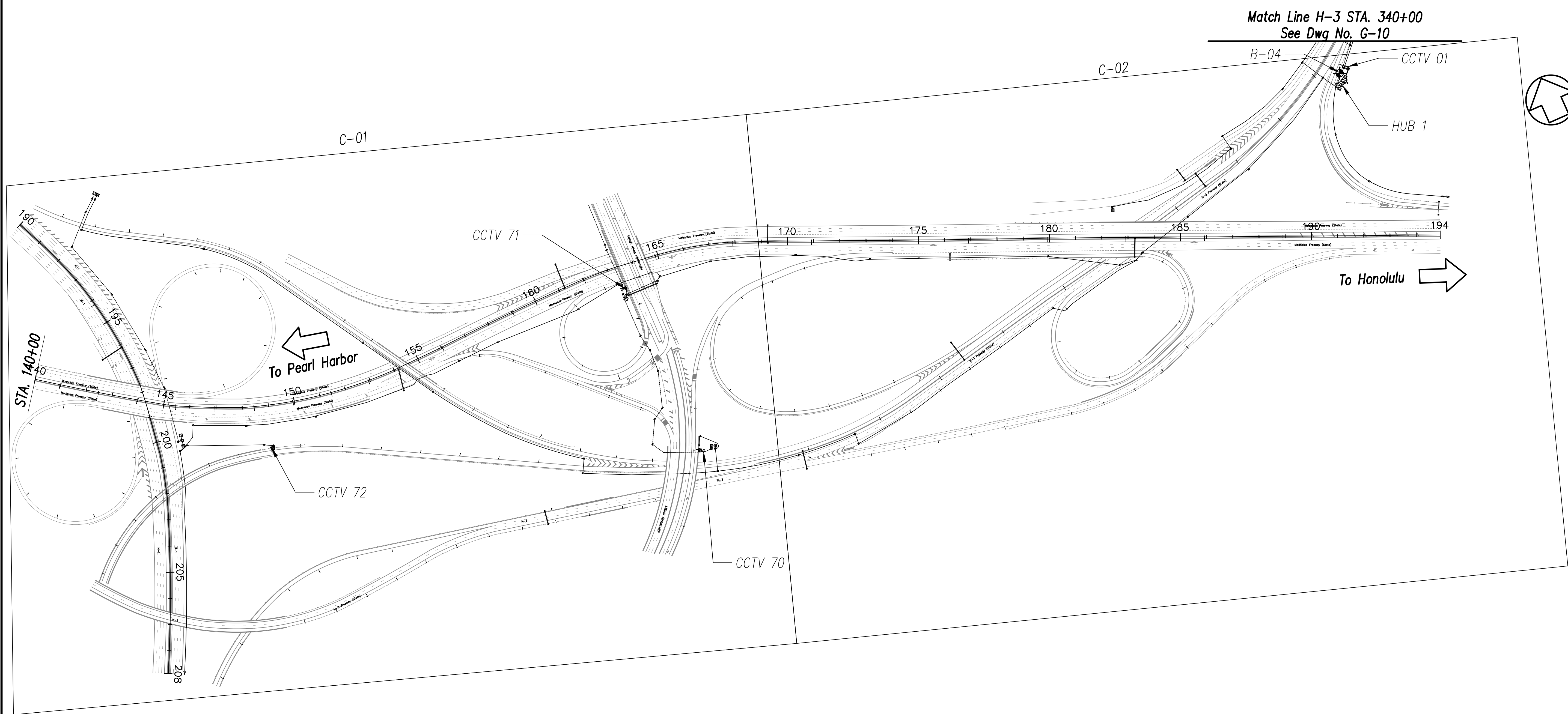
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 Signature: *David Palley*
 EXPIRATION DATE OF LICENSE: 4/20/2028

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS
TYPICAL CONSTRUCTION NOTES

Freeway Management System, Phase 4
Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

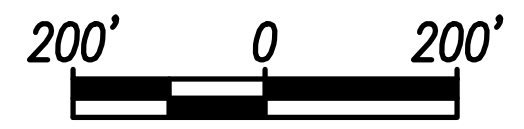
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	13	111



ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

LEGEND:
 Boring Location

ITS KEY PLAN (1 OF 5)
 Scale: 1" = 200'



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 Signature: *David Palley*
 EXPIRATION DATE OF LICENSE: 4/20/2028

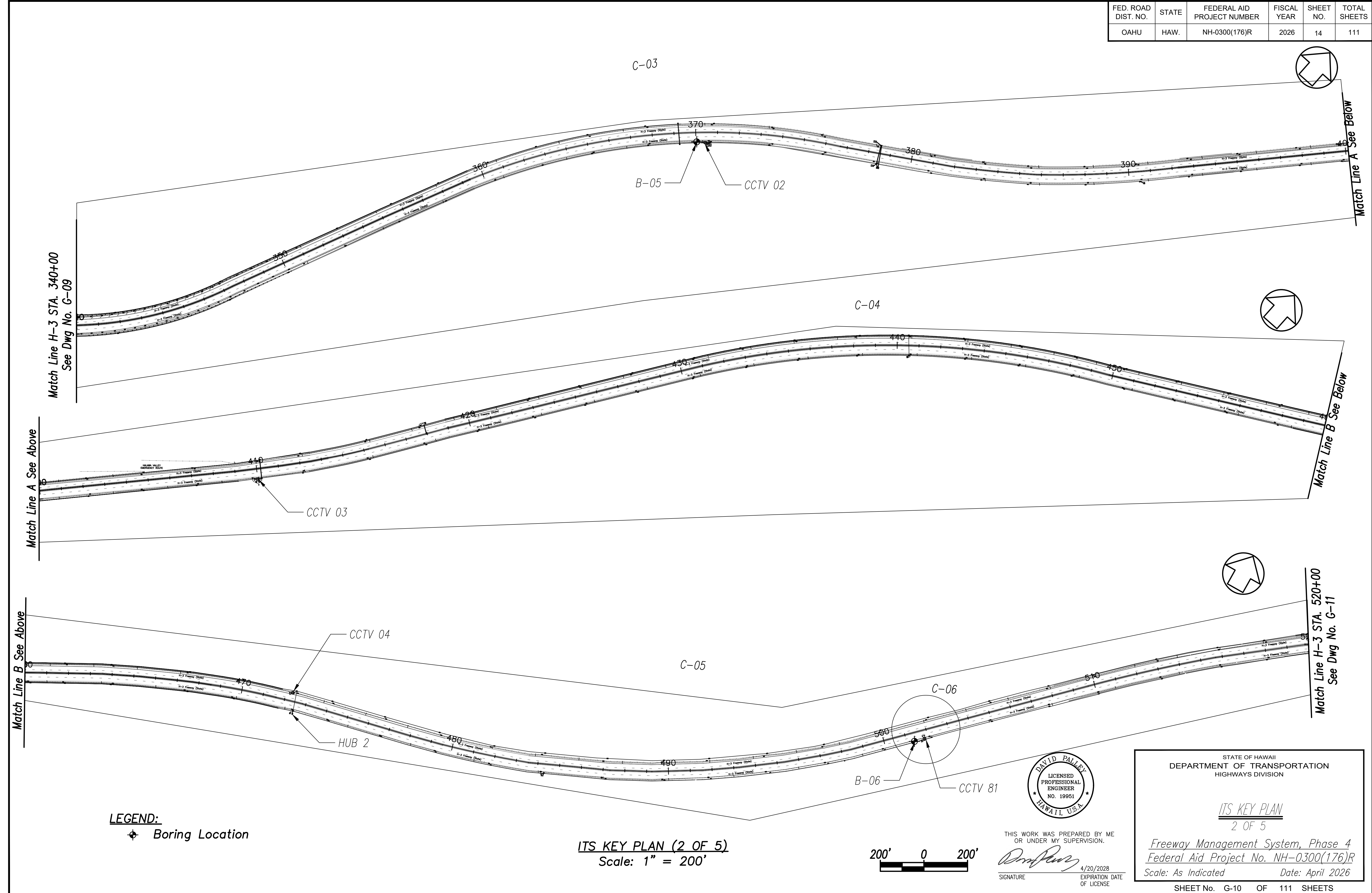
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS KEY PLAN
 1 OF 5

Freeway Management System, Phase 4
Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. G-9 OF 111 SHEETS

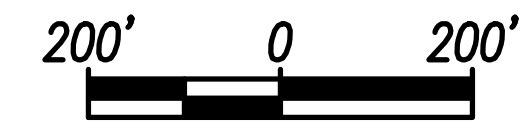
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	14	111



ORIGINAL PLAN	DATE
NO. _____	_____
SURVEY PLOTTED BY _____	DATE _____
DRAWN BY _____	TRACED BY _____
DESIGNED BY _____	QUANTITIES BY _____
CHECKED BY _____	_____

LEGEND:
 Boring Location

ITS KEY PLAN (2 OF 5)
 Scale: 1" = 200'



DAVID PALLEY
 LICENSED PROFESSIONAL ENGINEER
 NO. 19951
 HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
 Signature: *David Palley*
 Date: 4/20/2028
 Expiration Date of License

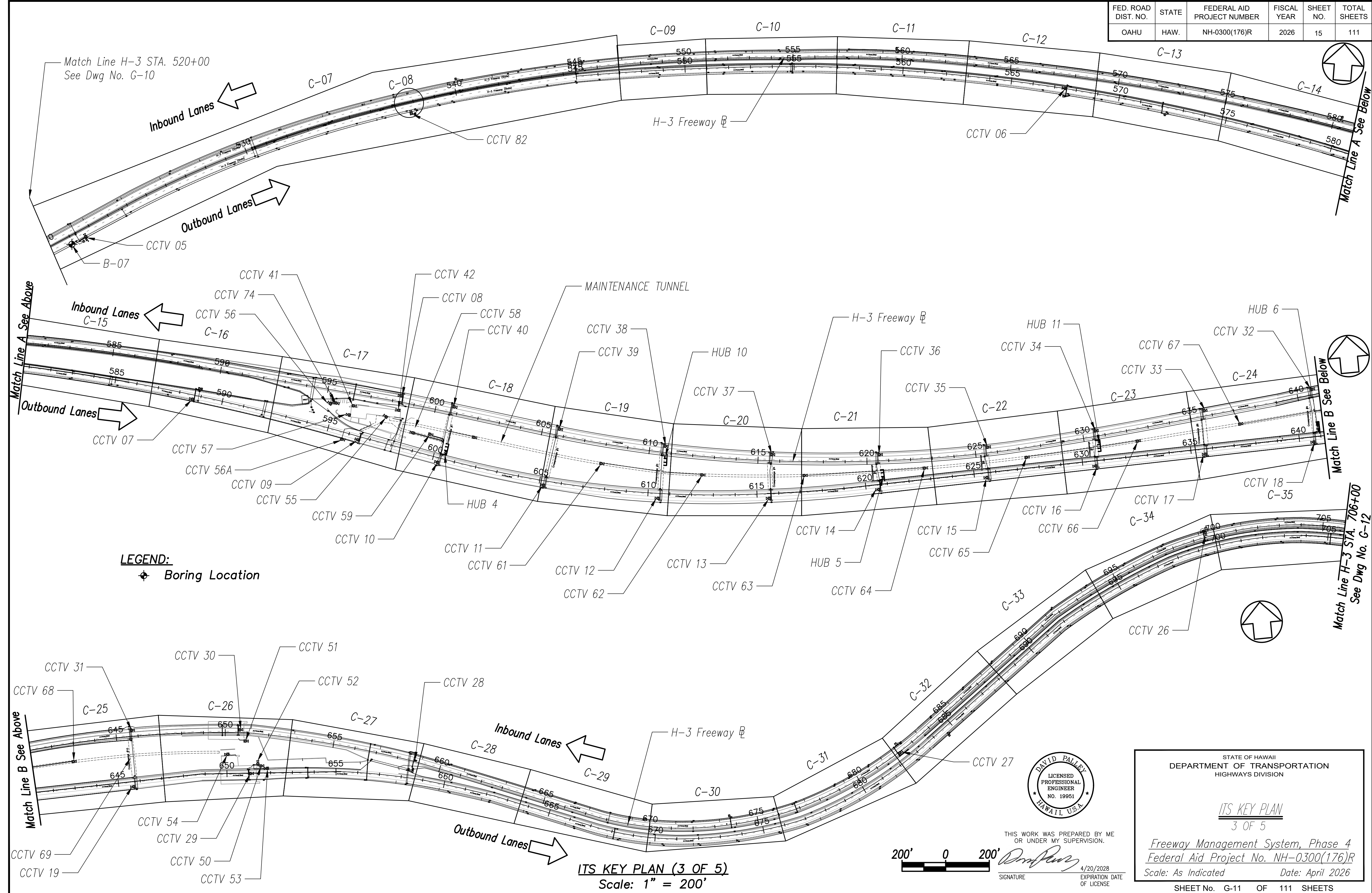
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS KEY PLAN
 2 OF 5

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. G-10 OF 111 SHEETS

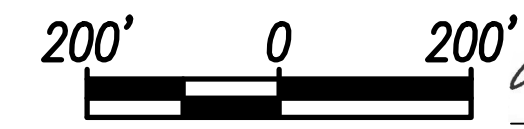
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	15	111



LEGEND:
 ◆ Boring Location

ORIGINAL PLAN
 SURVEY PLOTTED BY
 DATE
 DRAWN BY
 TRACED BY
 DESIGNED BY
 QUANTITIES BY
 CHECKED BY
 No.

ITS KEY PLAN (3 OF 5)
 Scale: 1" = 200'



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 SIGNATURE: *David Palley*
 EXPIRATION DATE OF LICENSE: 4/20/2028

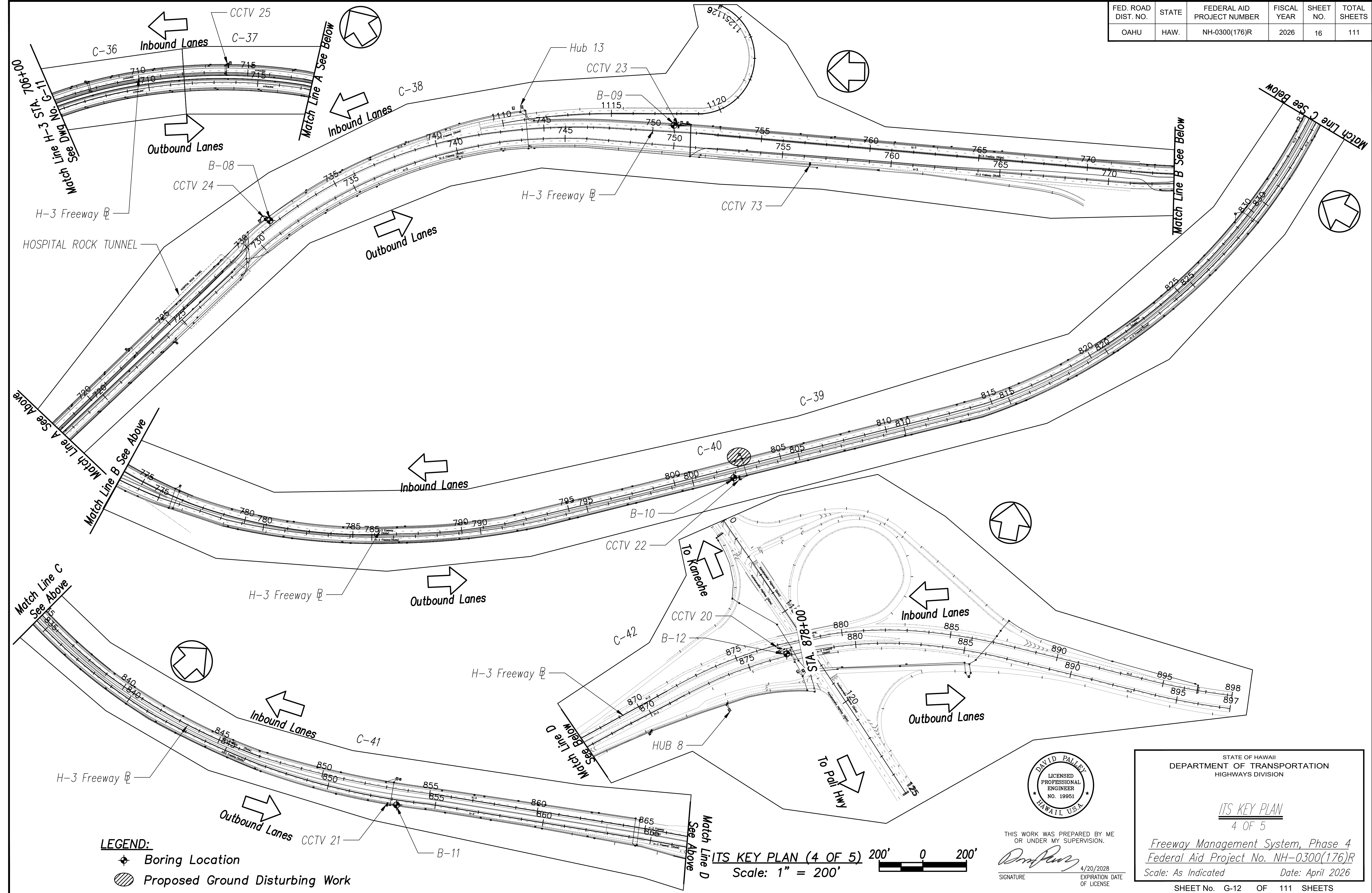
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS KEY PLAN
 3 OF 5

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. G-11 OF 111 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	16	111



ORIGINAL PLAN	DATE
NO. _____	_____
SURVEY PLOTTED BY _____	DATE _____
DRAWN BY _____	TRACED BY _____
DESIGNED BY _____	QUANTITIES BY _____
CHECKED BY _____	

LEGEND:
 ◆ Boring Location
 ▨ Proposed Ground Disturbing Work

ITS KEY PLAN (4 OF 5) 200' 0 200'
 Scale: 1" = 200'



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 Signature: *David Palley*
 DATE: 4/20/2028
 EXPIRATION DATE OF LICENSE

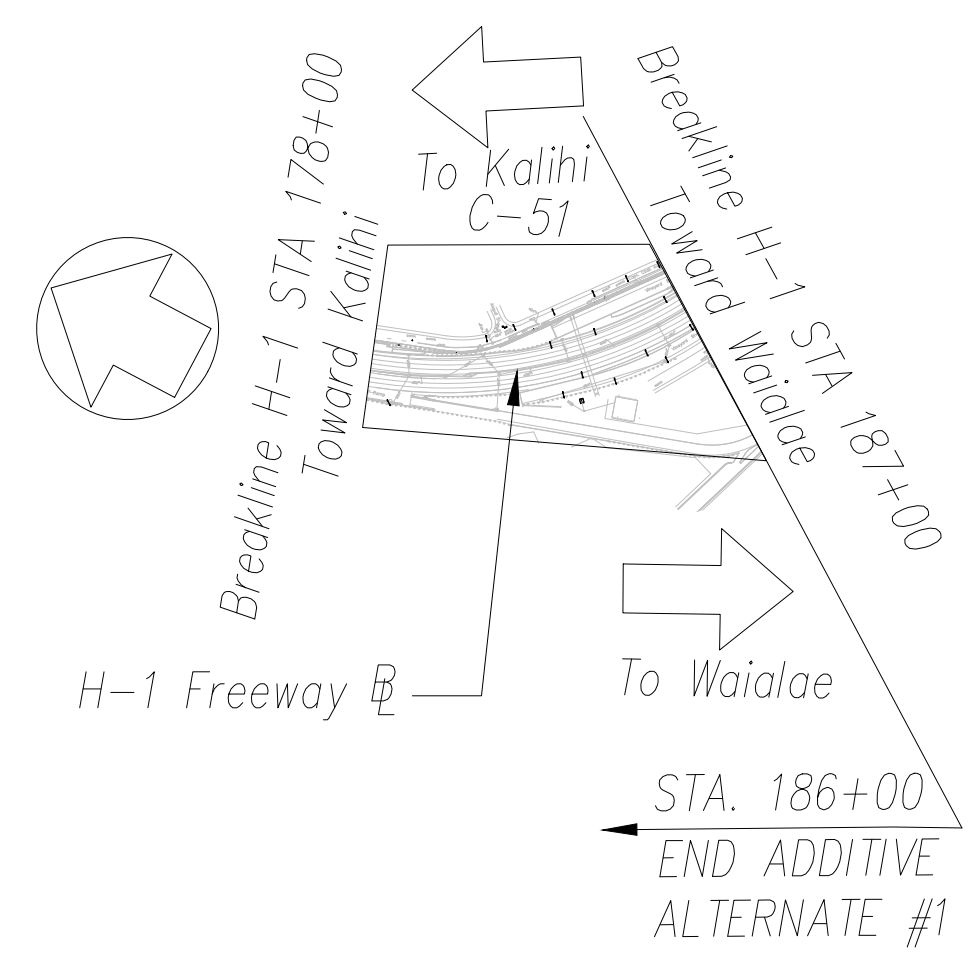
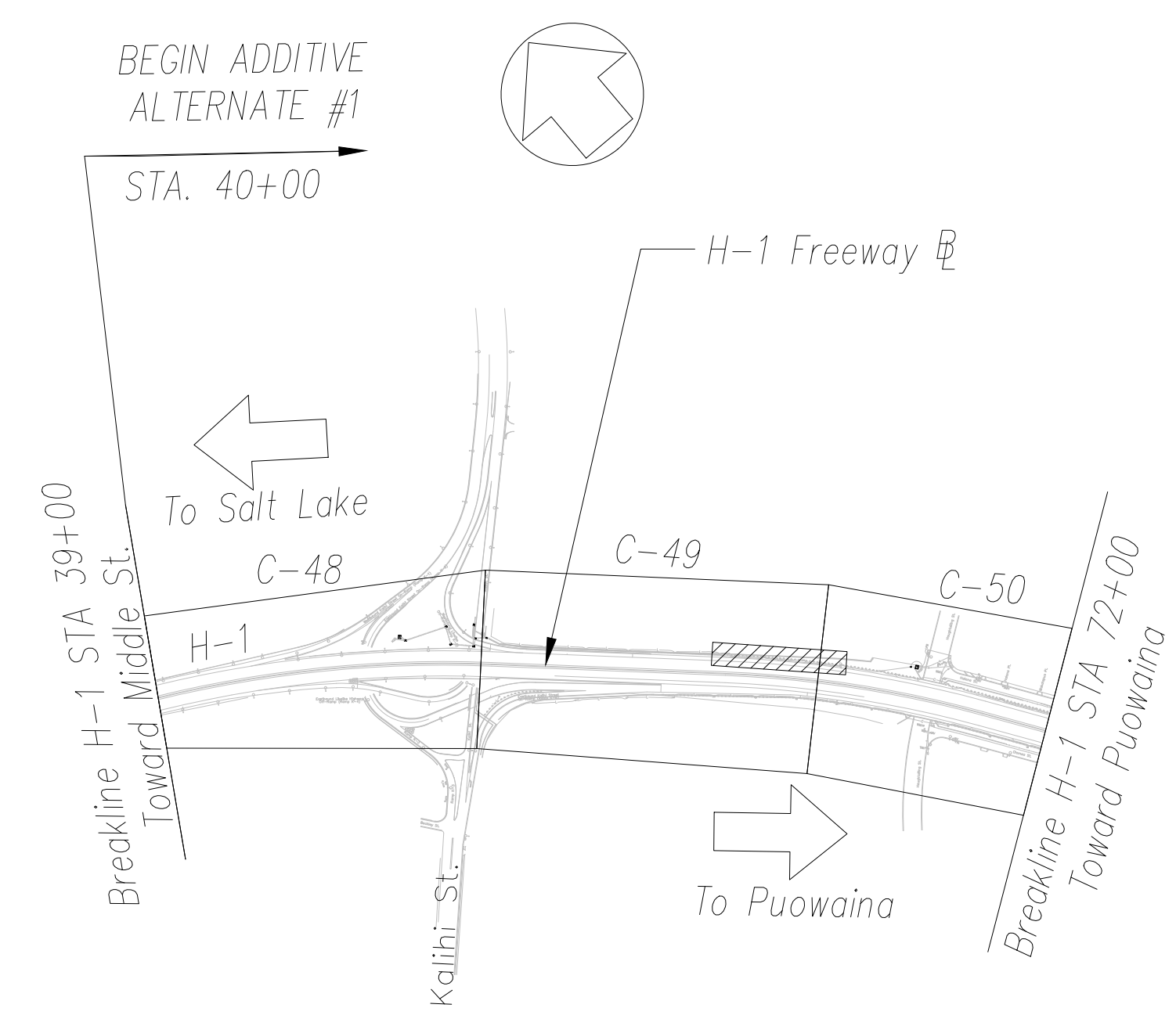
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS KEY PLAN
 4 OF 5

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. G-12 OF 111 SHEETS

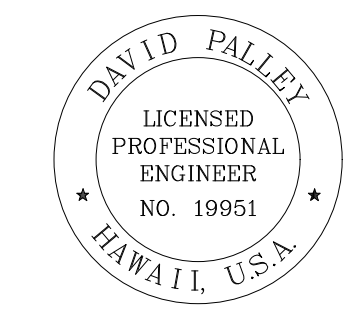
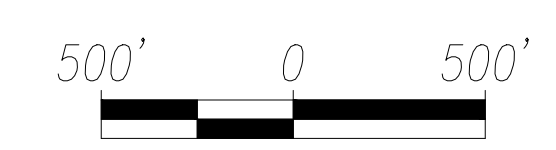
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	17	111



LEGEND:

-  Boring Location
-  Proposed Ground Disturbing Work

ITS KEY PLAN (5 OF 5)
Scale: 1" = 500'



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David Palley
SIGNATURE 4/20/2028
EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ITS KEY PLAN
5 OF 5

Freeway Management System, Phase 4
Federal Aid Project No. NH-0300(176)R

Scale: As Indicated Date: April 2026

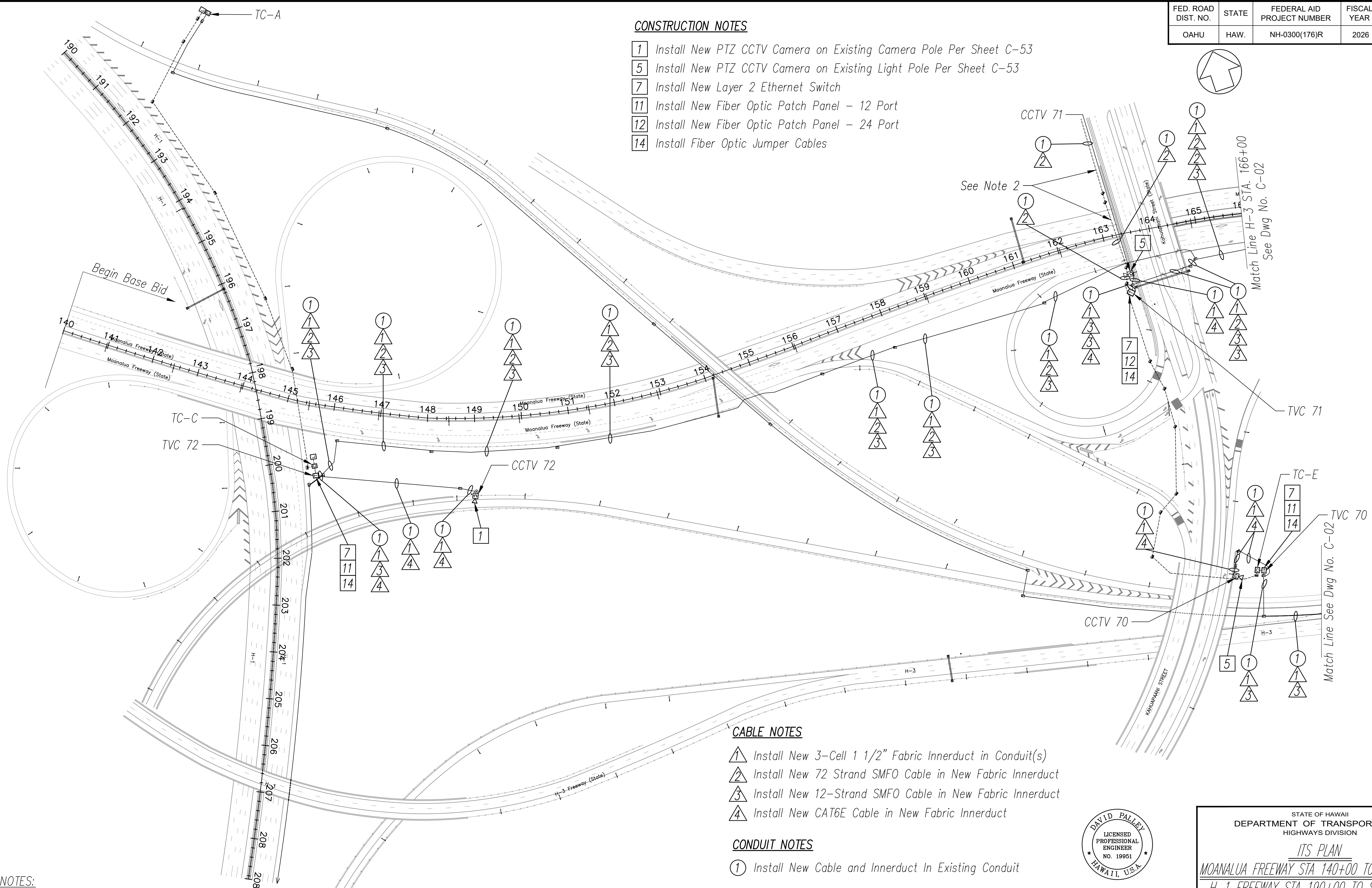
SHEET No. G-13 OF 111 SHEETS

ORIGINAL PLAN	DATE
STUDY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	18	111

CONSTRUCTION NOTES

- 1 Install New PTZ CCTV Camera on Existing Camera Pole Per Sheet C-53
- 5 Install New PTZ CCTV Camera on Existing Light Pole Per Sheet C-53
- 7 Install New Layer 2 Ethernet Switch
- 11 Install New Fiber Optic Patch Panel - 12 Port
- 12 Install New Fiber Optic Patch Panel - 24 Port
- 14 Install Fiber Optic Jumper Cables



CABLE NOTES

- 1 Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- 2 Install New 72 Strand SMFO Cable in New Fabric Innerduct
- 3 Install New 12-Strand SMFO Cable in New Fabric Innerduct
- 4 Install New CAT6E Cable in New Fabric Innerduct

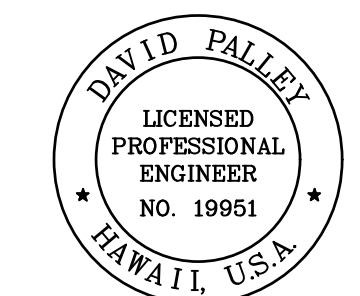
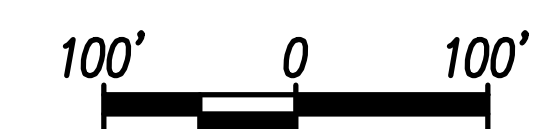
CONDUIT NOTES

- 1 Install New Cable and Innerduct In Existing Conduit

NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.
- 2. Install Proposed 72-Strand Single Mode Trunk Cable in Same Innerduct as Existing 36-Strand Trunk, Replace Connection to Existing Ulune CCTV Cabinet.

MOANALUA FREEWAY - STA 140+00 TO STA 166+00
H-1 STA 190+00 TO STA 208+00 (BASE BID)
 Scale: 1" = 100'



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
 Signature: [Signature]
 EXPIRATION DATE OF LICENSE: 4/20/2028

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS PLAN
MOANALUA FREEWAY STA 140+00 TO STA 166+00
H-1 FREEWAY STA 190+00 TO STA 208+00
 Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. C-01 OF 111 SHEETS

DATE	
DESIGNED BY	
CHECKED BY	
TRACED BY	
NO. _____	

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	19	111

CONSTRUCTION NOTES

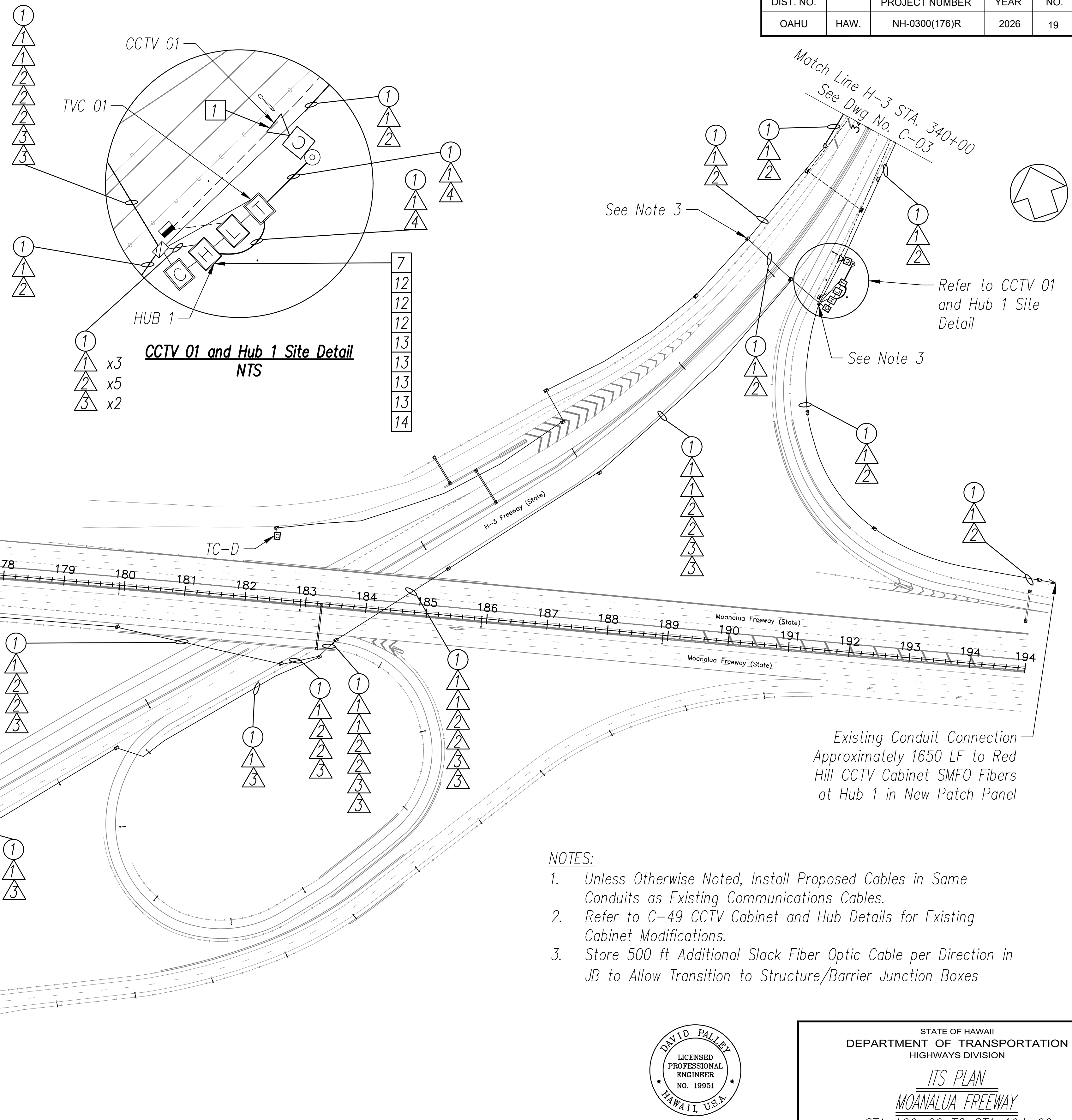
- 1 Install New PTZ CCTV Camera on Existing Camera Pole Per Sheet C-53
- 7 Install New Layer 2 Ethernet Switch
- 11 Install New Fiber Optic Patch Panel – 12 Port
- 12 Install New Fiber Optic Patch Panel – 24 Port
- 13 Install New Fiber Optic Patch Panel – 144 Port
- 14 Install Fiber Optic Jumper Cables

CABLE NOTES

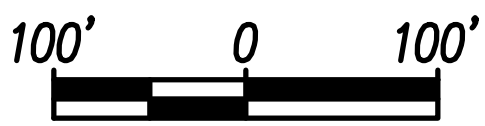
- 1 Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- 2 Install New 72-Strand SMFO Cable in New Fabric Innerduct
- 3 Install New 12-Strand SMFO Cable in New Fabric Innerduct
- 4 Install New CAT6E or Equivalent Cable in New Fabric Innerduct

CONDUIT NOTES

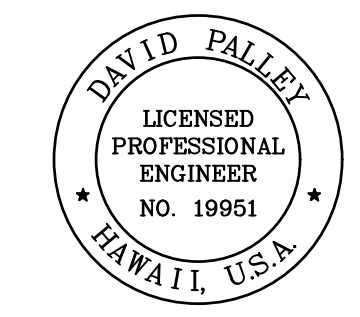
- 1 Install New Cable and Innerduct In Existing Conduit



MOANALUA FREEWAY – STA 163+00 TO STA 194+00
 (BASE BID)
 Scale: 1" = 100'



- NOTES:**
1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.
 2. Refer to C-49 CCTV Cabinet and Hub Details for Existing Cabinet Modifications.
 3. Store 500 ft Additional Slack Fiber Optic Cable per Direction in JB to Allow Transition to Structure/Barrier Junction Boxes



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 Signature: *David Palley*
 Date: 4/20/2028
 Expiration Date of License

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

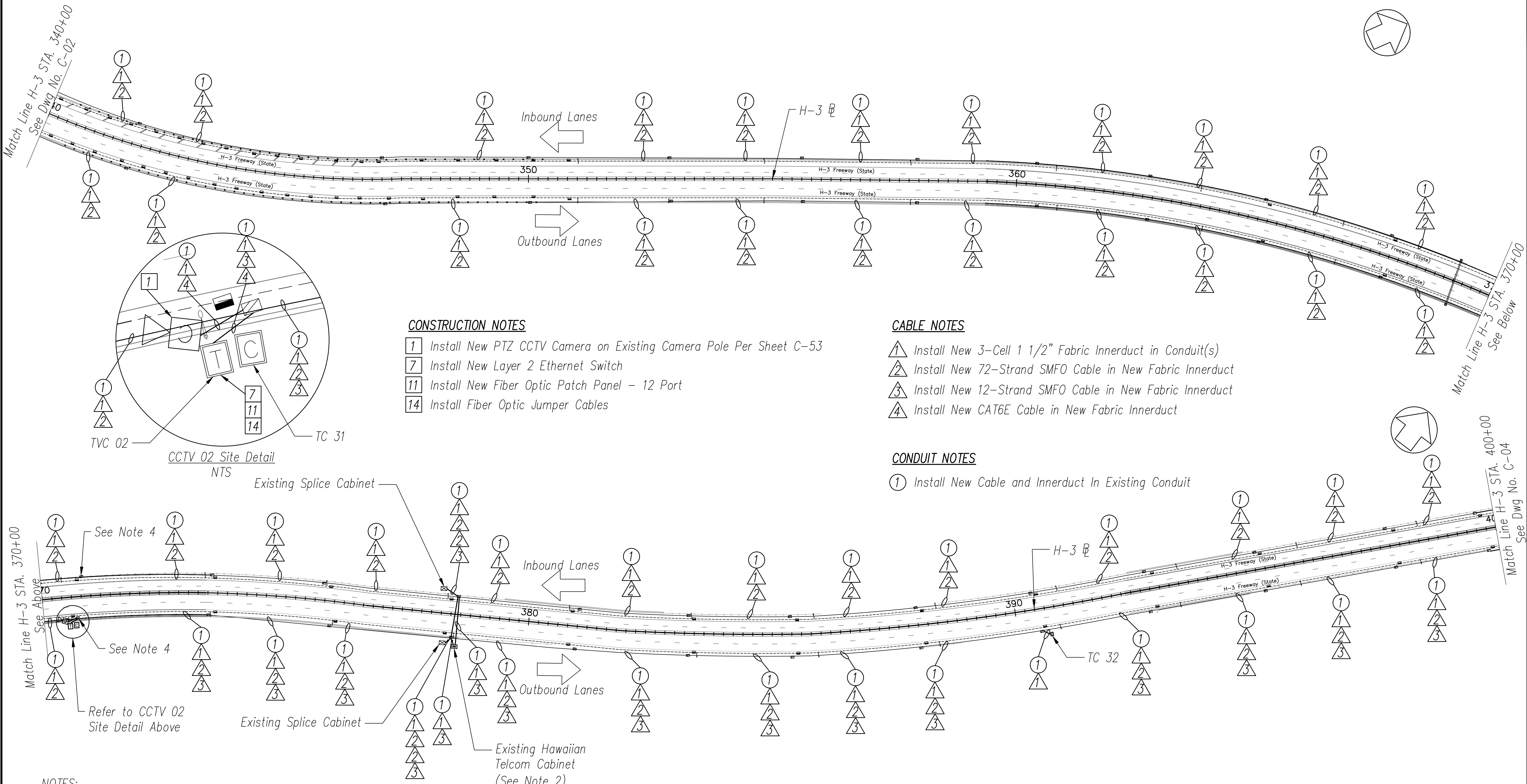
ITS PLAN
MOANALUA FREEWAY
 STA 166+00 TO STA 194+00

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. C-02 OF 111 SHEETS

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	20	111



CONSTRUCTION NOTES

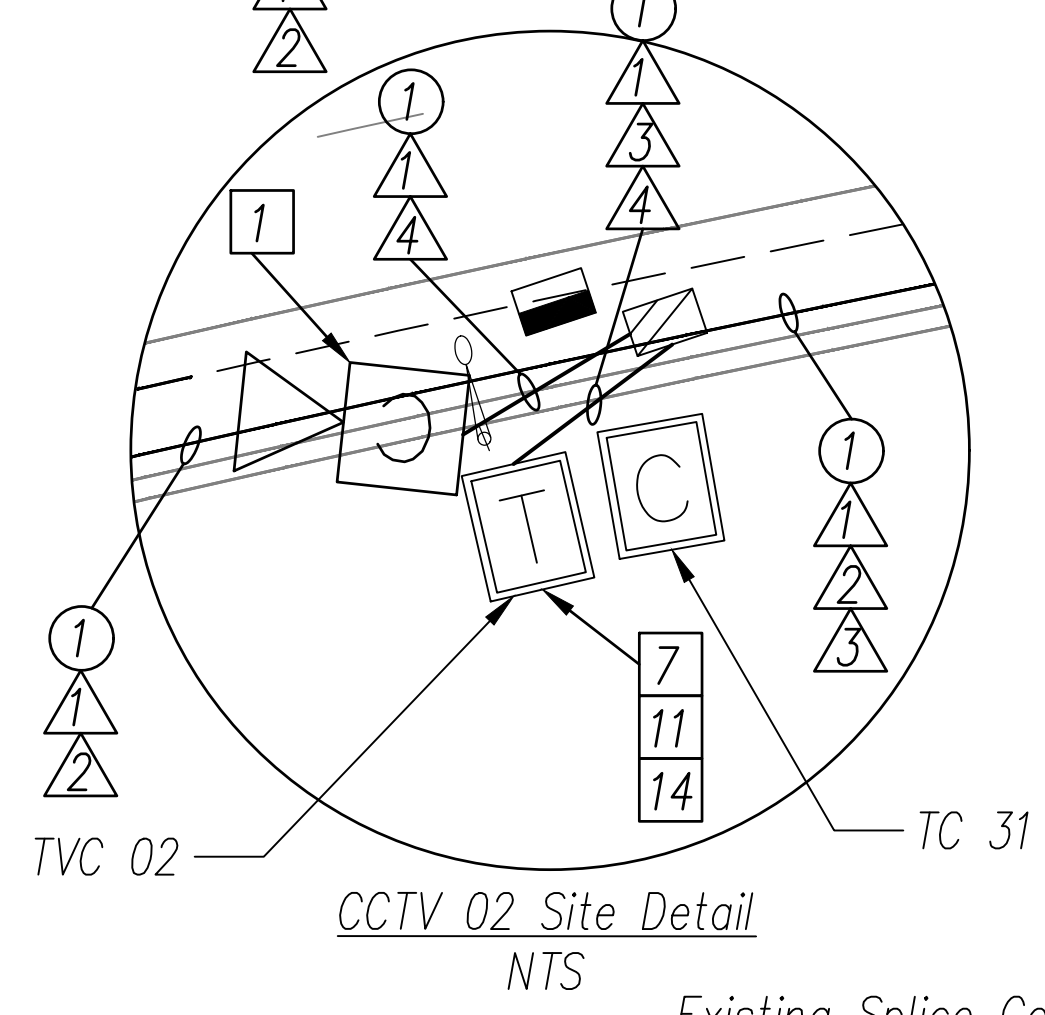
- 1 Install New PTZ CCTV Camera on Existing Camera Pole Per Sheet C-53
- 7 Install New Layer 2 Ethernet Switch
- 11 Install New Fiber Optic Patch Panel - 12 Port
- 14 Install Fiber Optic Jumper Cables

CABLE NOTES

- 1 Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- 2 Install New 72-Strand SMFO Cable in New Fabric Innerduct
- 3 Install New 12-Strand SMFO Cable in New Fabric Innerduct
- 4 Install New CAT6E Cable in New Fabric Innerduct

CONDUIT NOTES

- 1 Install New Cable and Innerduct In Existing Conduit



CCTV 02 Site Detail
NTS

Existing Splice Cabinet

Existing Splice Cabinet

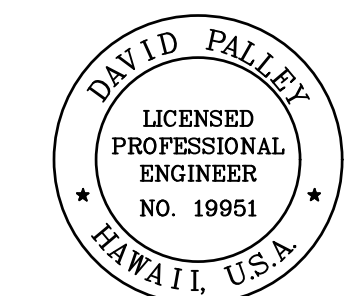
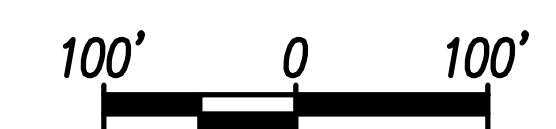
Existing Hawaiian
Telcom Cabinet
(See Note 2)

NOTES:

- Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.
- Contact Spectrum Telecommunications Company Prior to Beginning Work. Comply With All Spectrum Telecommunications Requirements to Minimize Network Connection Downtime.
- Refer to C-49 CCTV Cabinet and Hub Details for Existing Cabinet Modifications.
- Store 100 ft Additional Slack Fiber Optic Cable per Direction in JB to Allow Transition to Structure/Barrier Junction Boxes.

H-3 FREEWAY - STA 340+00 TO STA 400+00

(BASE BID)
Scale: 1" = 100'



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Signature: [Signature]
4/20/2028
EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
STA 340+00 TO STA 400+00

Freeway Management System, Phase 4
Federal Aid Project No. NH-0300(176)R
Scale: As Indicated Date: April 2026

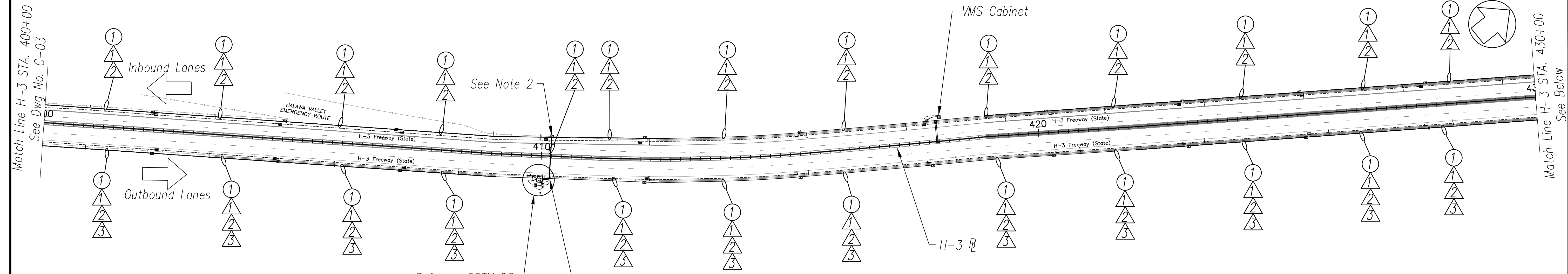
SHEET No. C-03 OF 111 SHEETS

DATE	_____
DESIGNED BY	_____
CHECKED BY	_____
QUANTITIES BY	_____
NOTE BOOK	_____
ORIGINAL PLAN	_____
SURVEY PLOTTED BY	_____

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	21	111

Match Line H-3 STA. 400+00
See Dwg No. C-03

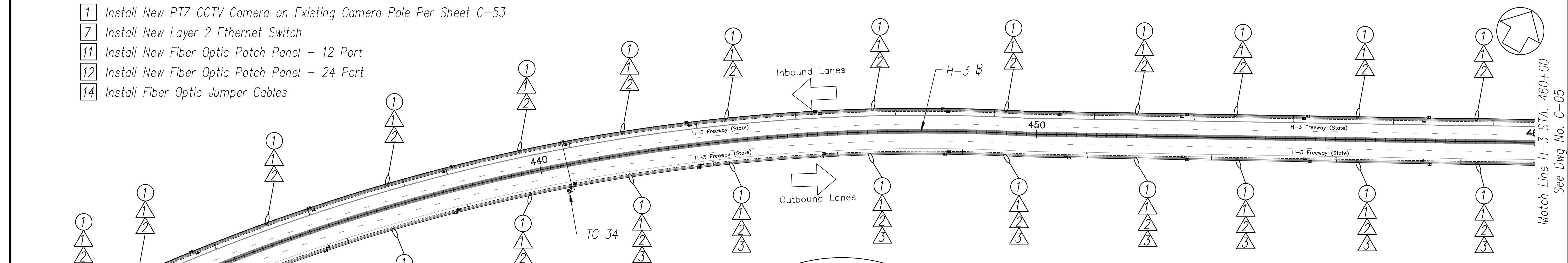
Match Line H-3 STA. 430+00
See Below



CONSTRUCTION NOTES

- 1 Install New PTZ CCTV Camera on Existing Camera Pole Per Sheet C-53
- 7 Install New Layer 2 Ethernet Switch
- 11 Install New Fiber Optic Patch Panel - 12 Port
- 12 Install New Fiber Optic Patch Panel - 24 Port
- 14 Install Fiber Optic Jumper Cables

Refer to CCTV 03 Site Detail Below
See Note 2

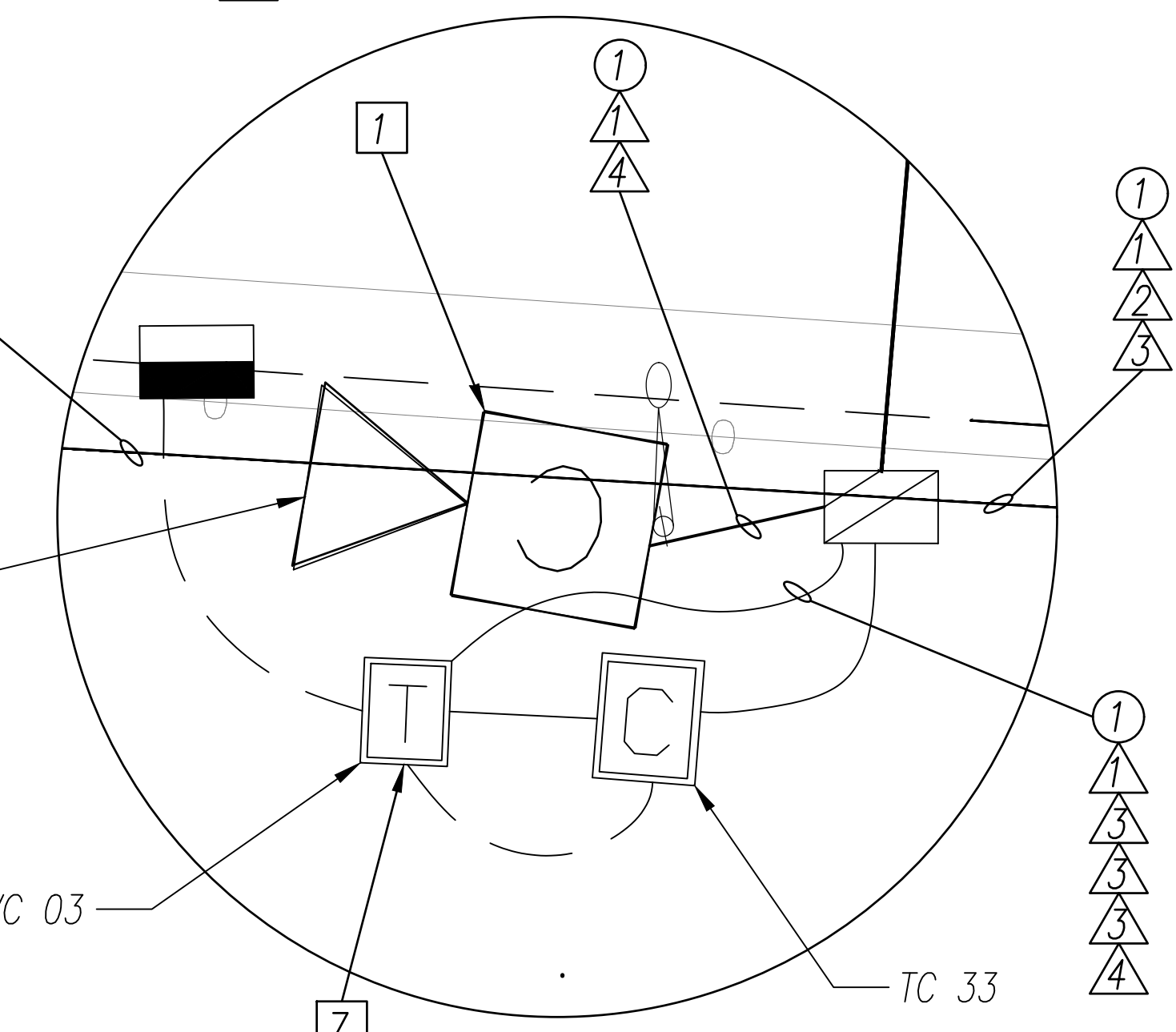


CABLE NOTES

- 1 Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- 2 Install New 72-Strand SMFO Cable in New Fabric Innerduct
- 3 Install New 12-Strand SMFO Cable in New Fabric Innerduct
- 4 Install New CAT6E Cable in New Fabric Innerduct

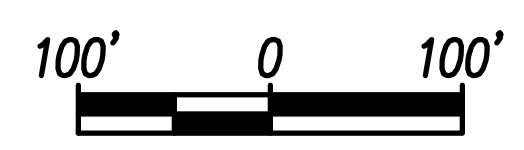
CONDUIT NOTES

- 1 Install New Cable and Innerduct In Existing Conduit



H-3 FREEWAY - STA 400+00 TO STA 460+00
(BASE BID)
Scale: 1" = 100'

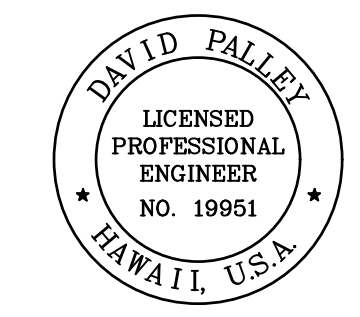
CCTV 03 SITE DETAIL
NTS



DATE	_____
SURVEY PLOTTED BY	_____
ORIGINAL PLAN DRAWN BY	_____
NOTE BOOK DESIGNED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
No.	_____

NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.
- 2. Store 100 ft Additional Slack Fiber Optic Cable per Direction in JB to Allow Transition to Structure/Barrier Junction Boxes



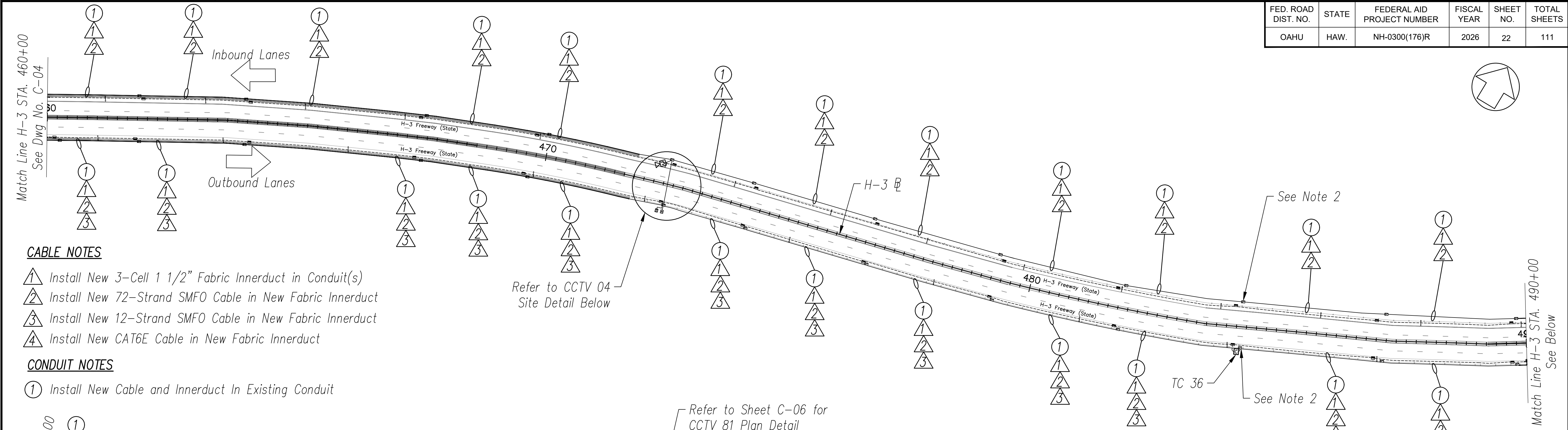
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Signature: _____
4/20/2028
EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
STA 400+00 TO STA 460+00
Freeway Management System, Phase 4
Federal Aid Project No. NH-0300(176)R
Scale: As Indicated Date: April 2026

SHEET No. C-04 OF 111 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	22	111

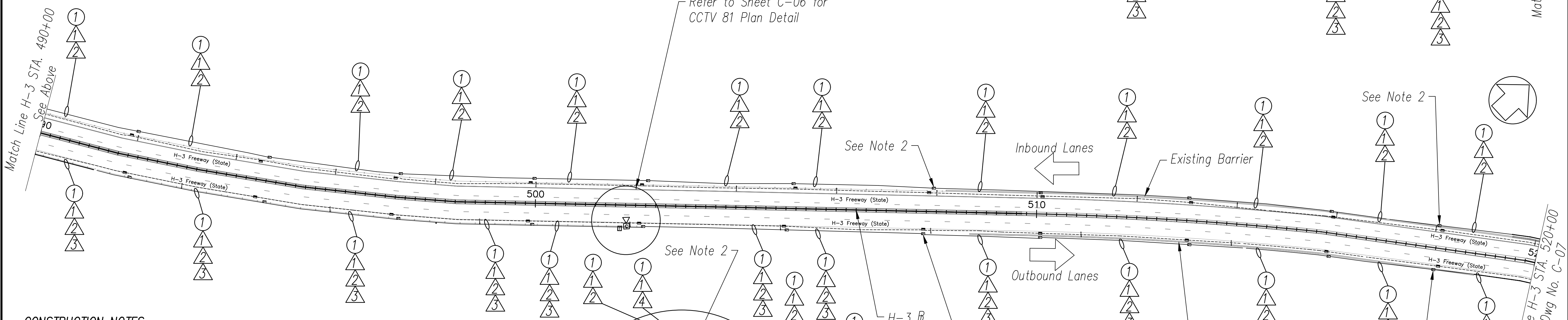


CABLE NOTES

- ① Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- ② Install New 72-Strand SMFO Cable in New Fabric Innerduct
- ③ Install New 12-Strand SMFO Cable in New Fabric Innerduct
- ④ Install New CAT6E Cable in New Fabric Innerduct

CONDUIT NOTES

- ① Install New Cable and Innerduct In Existing Conduit

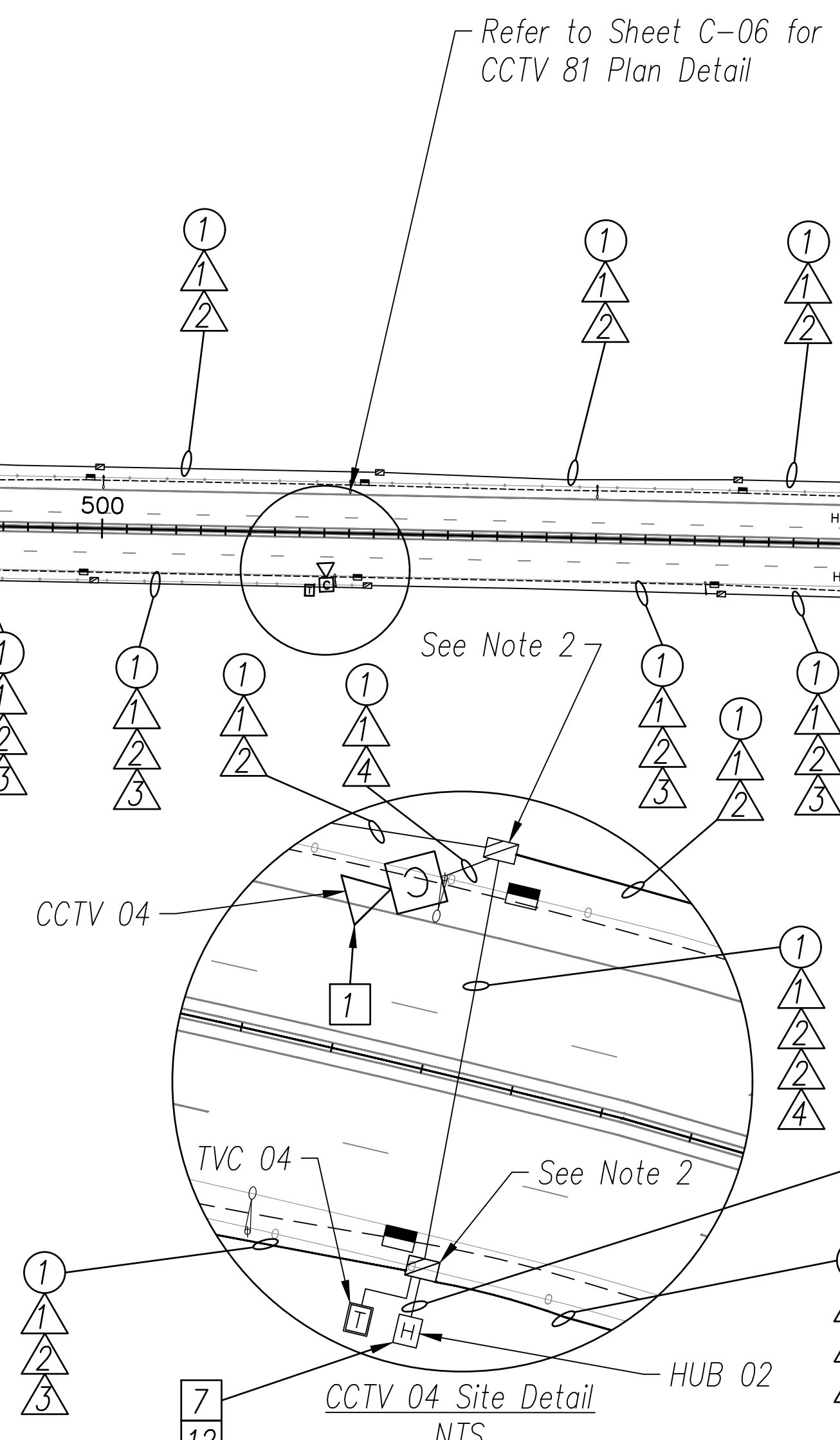


CONSTRUCTION NOTES

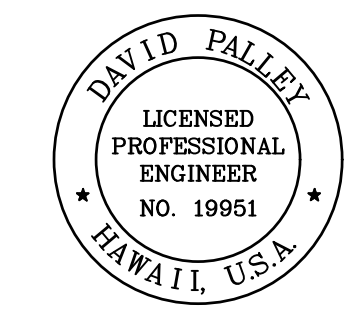
- ① Install New PTZ CCTV Camera on Existing Camera Pole Per Sheet C-53
- ⑦ Install New Layer 2 Ethernet Switch
- ⑫ Install New Fiber Optic Patch Panel - 24 Port
- ⑬ Install New Fiber Optic Patch Panel - 124 Port
- ⑭ Install Fiber Optic Jumper Cables

NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.
- 2. Store 100 ft Additional Slack Fiber Optic Cable per Direction in JB to Allow Transition to Structure/Barrier Junction Boxes.



DATE
DESIGNED BY
CHECKED BY
QUANTITIES BY
NO.



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 Signature: *David Palley*
 4/20/2028
 EXPIRATION DATE OF LICENSE

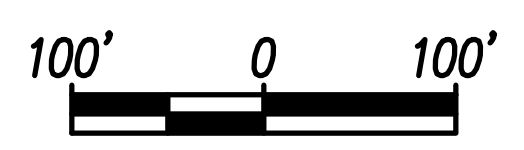
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
 STA 460+00 TO STA 520+00
 Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. C-05 OF 111 SHEETS

H-3 FREEWAY - STA 460+00 TO STA 520+00 (BASE BID)

Scale: 1" = 100'



FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	23	111

CONSTRUCTION NOTES

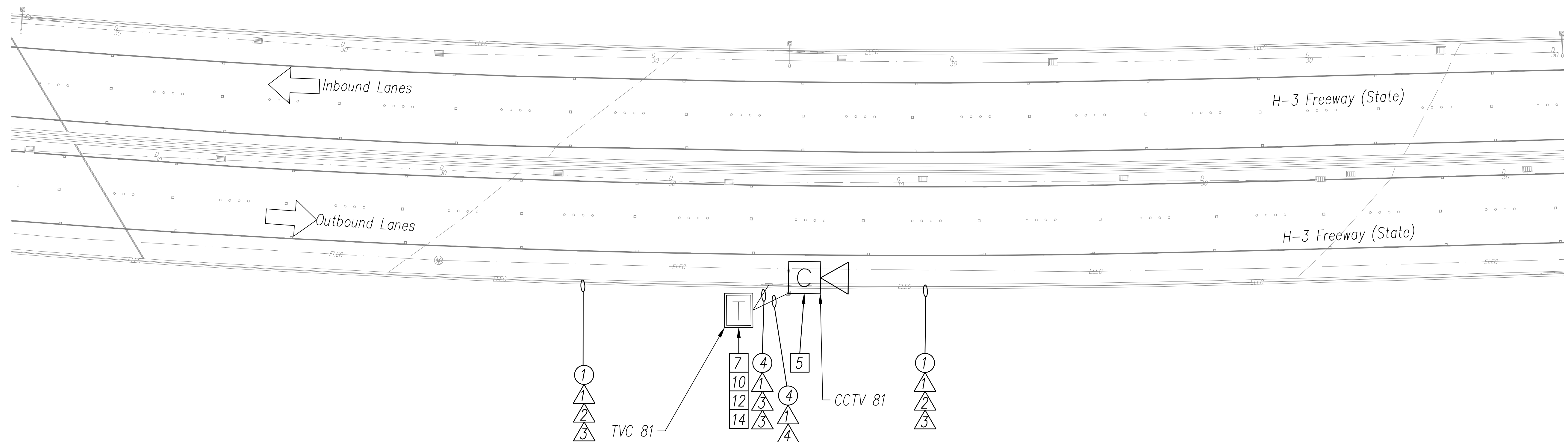
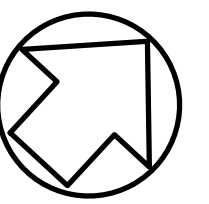
- 5 Install New CCTV Camera on Existing Light Pole Per Sheet C-53
- 7 Install New Layer 2 Ethernet Switch
- 10 Install New 332A Cabinet Assembly Per Sheet C-51
- 12 Install New Fiber Optic Patch Panel - 24 Port
- 14 Install Fiber Optic Jumper Cables

CABLE NOTES

- 1 Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- 2 Install New 72-Strand SMFO Cable in New Fabric Innerduct
- 3 Install New 12-Strand SMFO Cable in New Fabric Innerduct
- 4 Install New CAT6E Cable in New Fabric Innerduct

CONDUIT NOTES

- 1 Install New Cable and Innerduct In Existing Conduit
- 4 Install 3" RGS Structure-Mounted Conduit

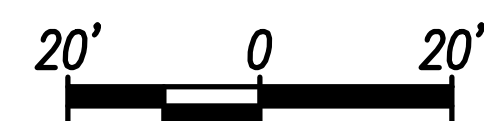


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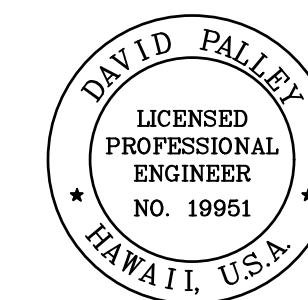
- Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.
- Refer to Sheet C-05 for Context of Site Location. Match Lines Omitted As Project Wide Alignment If For Reference Only and Has Not Been Surveyed.
- Background in This Sheet Has Been Surveyed.
- Refer to E-06 for Electrical Design.

H-3 FREEWAY - CCTV 81 SITE DETAIL

Scale: 1" = 20'



ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	



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David Palley
SIGNATURE

4/20/2028
EXPIRATION DATE OF LICENSE

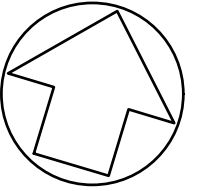
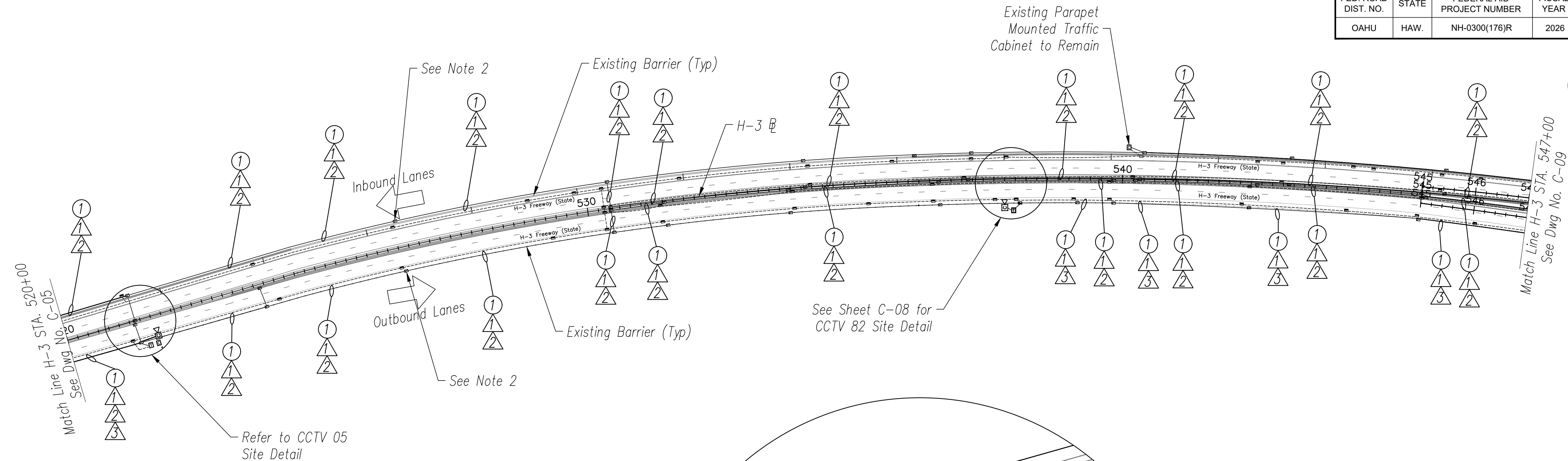
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
CCTV 81 - SITE A

Freeway Management System, Phase 4
Federal Aid Project No. NH-0300(176)R

Scale: As Indicated Date: April 2026

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	24	111



CONSTRUCTION NOTES

- 1 Install New PTZ CCTV Camera on Existing Camera Pole Per Sheet C-53
- 7 Install New Layer 2 Ethernet Switch
- 11 Install New Fiber Optic Patch Panel - 12 Port
- 14 Install Fiber Optic Jumper Cables

CABLE NOTES

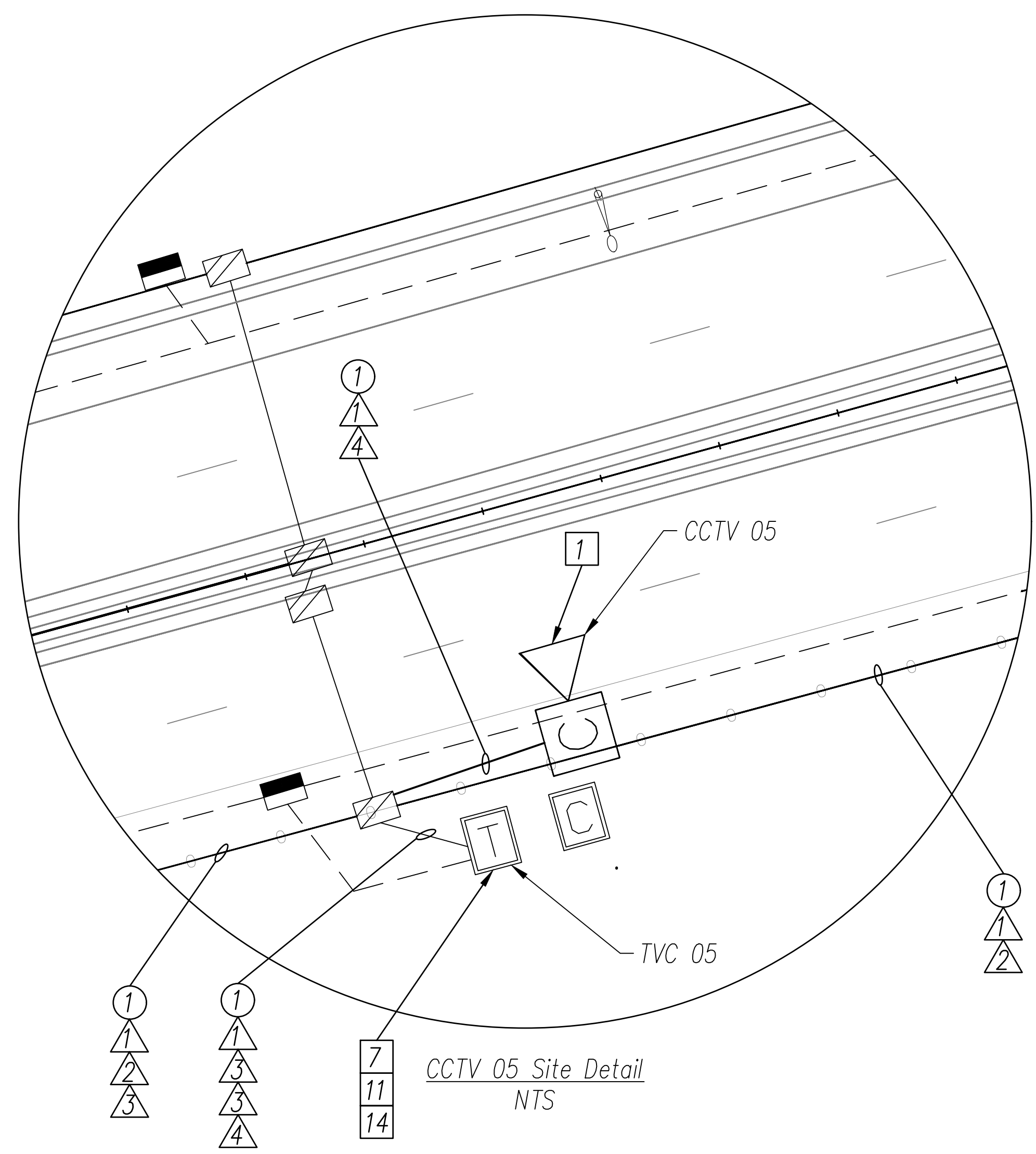
- 1 Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- 2 Install New 72-Strand SMFO Cable in New Fabric Innerduct
- 3 Install New 12-Strand SMFO Cable in New Fabric Innerduct
- 4 Install New CAT6E Cable in New Fabric Innerduct

CONDUIT NOTES

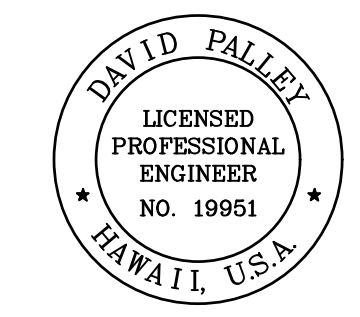
- 1 Install New Cable and Innerduct In Existing Conduit

NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.
- 2. Store 100 ft Additional Slack Fiber Optic Cable per Direction in JB to Allow Transition to Structure/Barrier Junction Boxes.



DATE	_____
SURVEY PLOTTED BY	_____
ORIGINAL PLAN	_____
DESIGNED BY	_____
TRACED BY	_____
DESIGNED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
No.	_____



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 Signature: _____
 EXPIRATION DATE OF LICENSE: 4/20/2028

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
 STA 520+00 TO STA 547+00

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. C-07 OF 111 SHEETS

H-3 FREEWAY - STA 520+00 TO STA 547+00
 (BASE BID)
 Scale: 1" = 100'

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	25	111

CONSTRUCTION NOTES

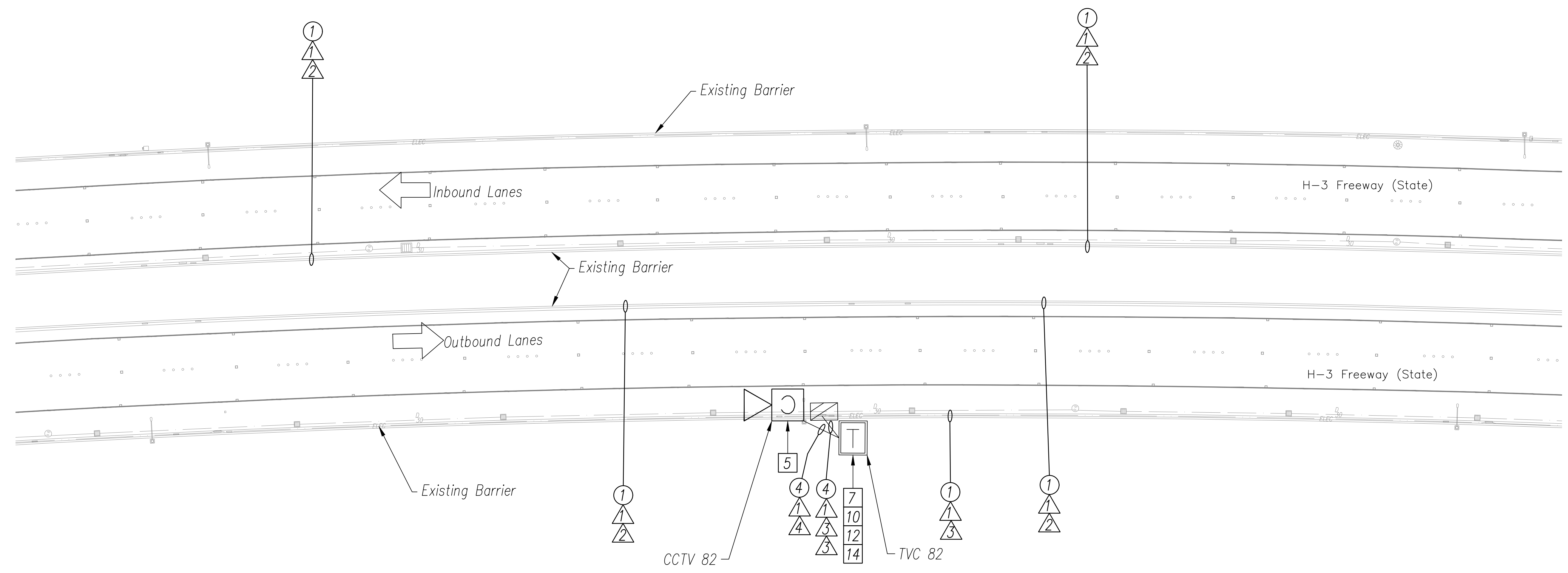
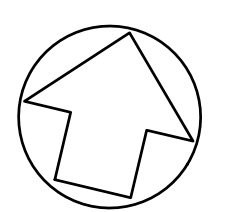
- 5 Install New PTZ CCTV Camera on Existing Light Pole Per Sheet C-53
- 7 Install New Layer 2 Ethernet Switch
- 10 Install New 332A Cabinet Assembly Per Sheet C-51
- 12 Install New Fiber Optic Patch Panel - 24 Port
- 14 Install Fiber Optic Jumper Cables

CABLE NOTES

- 1 Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- 2 Install New 72-Strand SMFO Cable in New Fabric Innerduct
- 3 Install New 12-Strand SMFO Cable in New Fabric Innerduct
- 4 Install New CAT6E Cable in New Fabric Innerduct

CONDUIT NOTES

- 1 Install New Cable and Innerduct In Existing Conduit
- 4 Install 3" RGS Structure-Mounted Conduit



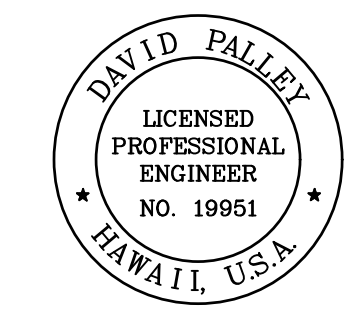
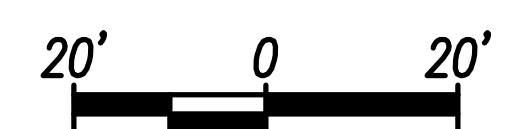
ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.
- 2. Refer to Sheet C-07 for Context of Site Location. Match Lines Omitted As Project Wide Alignment Is For Reference Only and Has Not Been Surveyed.
- 3. Background in This Sheet Has Been Surveyed.
- 4. Refer to E-08 for Electrical Design.

ITS PLAN - H3 FREEWAY - CCTV 82 SITE DETAIL

Scale: 1" = 20'



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 Signature: *David Palley*
 EXPIRATION DATE OF LICENSE: 4/20/2028

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
CCTV 82 - SITE B

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

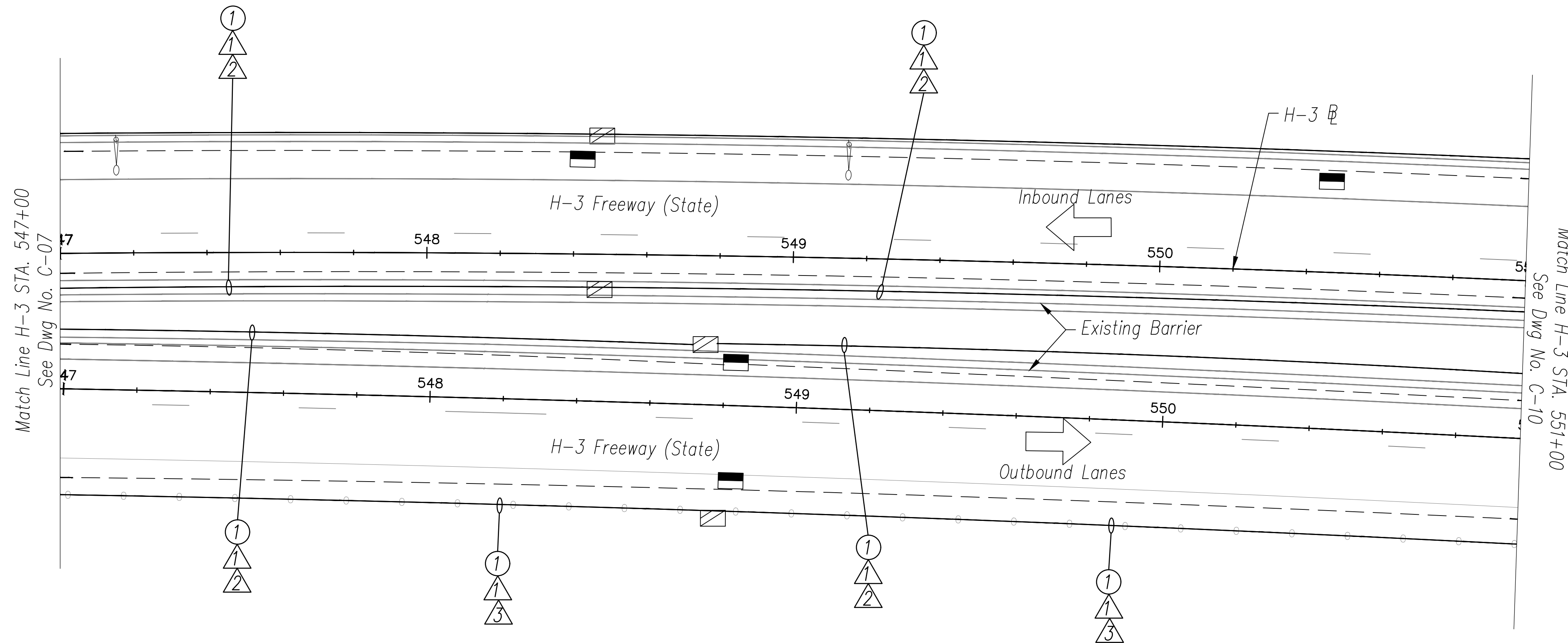
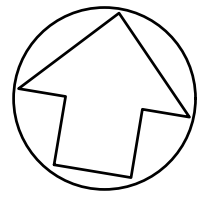
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	26	111

CABLE NOTES

- ① Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- ② Install New 72-Strand SMFO Cable in New Fabric Innerduct
- ③ Install New 12-Strand SMFO Cable in New Fabric Innerduct

CONDUIT NOTES

- ① Install New Cable and Innerduct In Existing Conduit



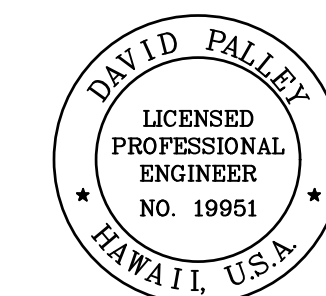
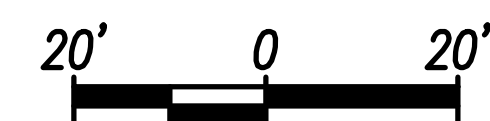
ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.

H-3 FREEWAY - STA 547+00 TO STA 551+00
(BASE BID)

Scale: 1" = 20'



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David Palley
SIGNATURE

4/20/2028
EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
STA 547+00 TO STA 551+00

Freeway Management System, Phase 4
Federal Aid Project No. NH-0300(176)R

Scale: As Indicated Date: April 2026

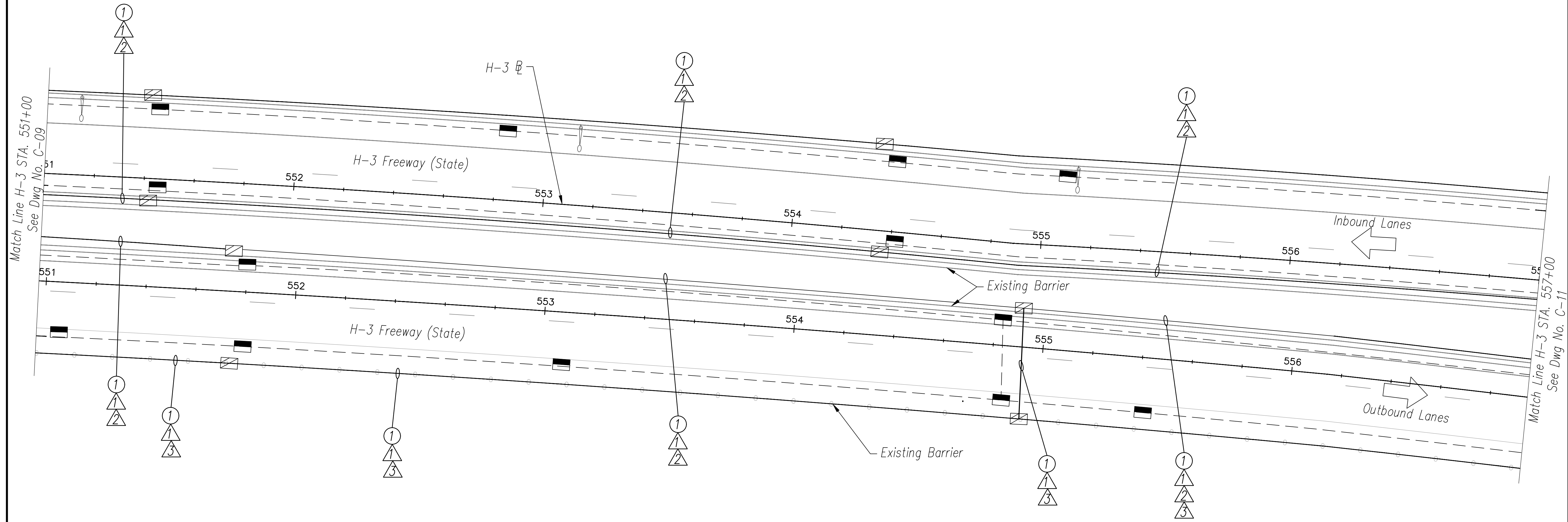
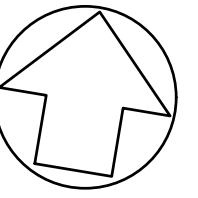
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	27	111

CABLE NOTES

- ① Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- ② Install New 72-Strand SMFO Cable in New Fabric Innerduct
- ③ Install New 12-Strand SMFO Cable in New Fabric Innerduct

CONDUIT NOTES

- ① Install New Cable and Innerduct In Existing Conduit



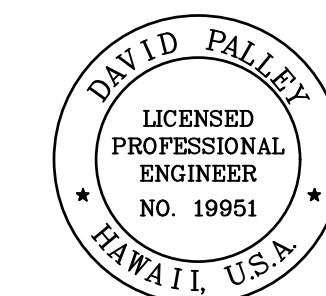
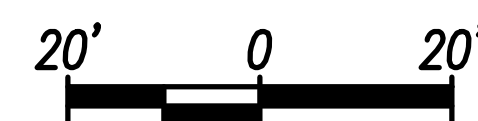
ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.

H-3 FREEWAY - STA 551+00 TO STA 557+00
(BASE BID)

Scale: 1" = 20'



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David Palley
SIGNATURE

4/20/2028
EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
STA 551+00 TO STA 557+00

Freeway Management System, Phase 4
Federal Aid Project No. NH-0300(176)R
Scale: As Indicated Date: April 2026

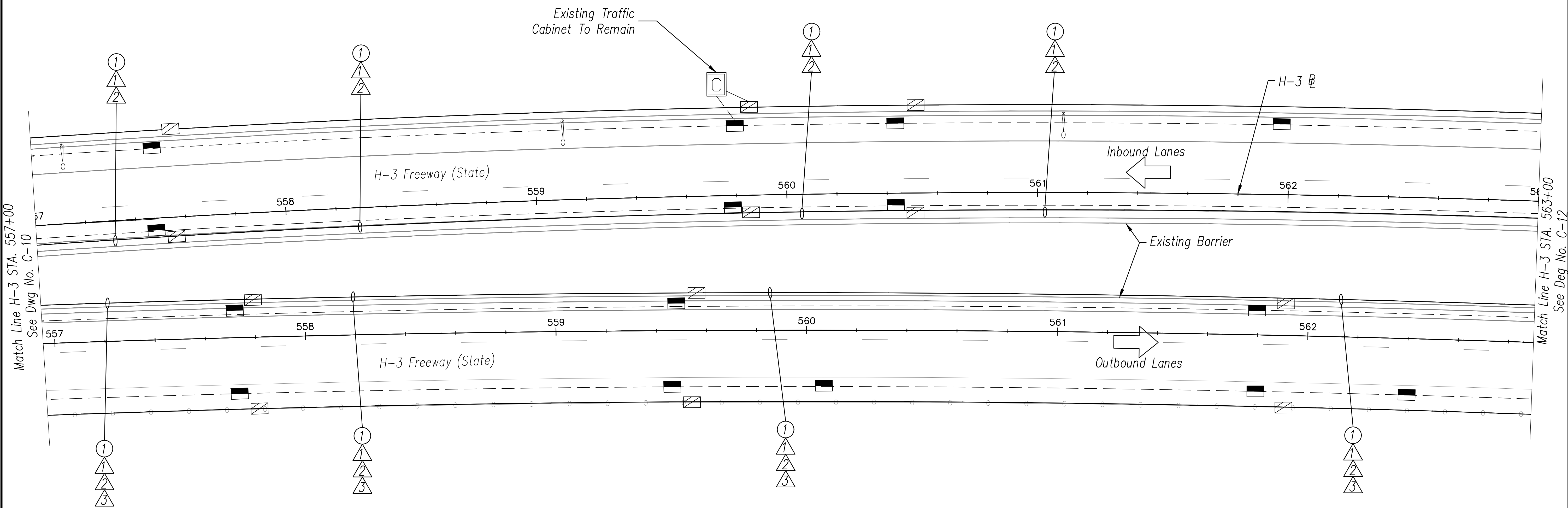
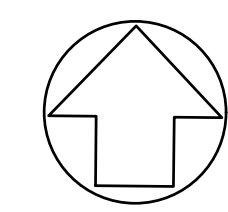
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	28	111

CABLE NOTES

- ① Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- ② Install New 72-Strand SMFO Cable in New Fabric Innerduct
- ③ Install New 12-Strand SMFO Cable in New Fabric Innerduct

CONDUIT NOTES

- ① Install New Cable and Innerduct In Existing Conduit



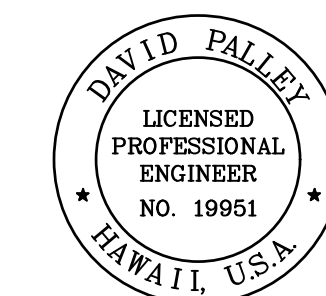
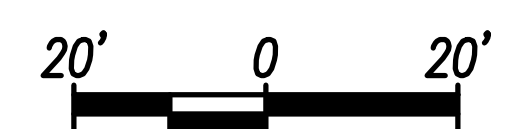
ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
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TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.

H-3 FREEWAY - STA 557+00 TO STA 563+00
(BASE BID)

Scale: 1" = 20'



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David Palley
SIGNATURE

4/20/2028
EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
STA 557+00 TO STA 563+00

Freeway Management System, Phase 4
Federal Aid Project No. NH-0300(176)R

Scale: As Indicated Date: April 2026

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	29	111

CONSTRUCTION NOTES

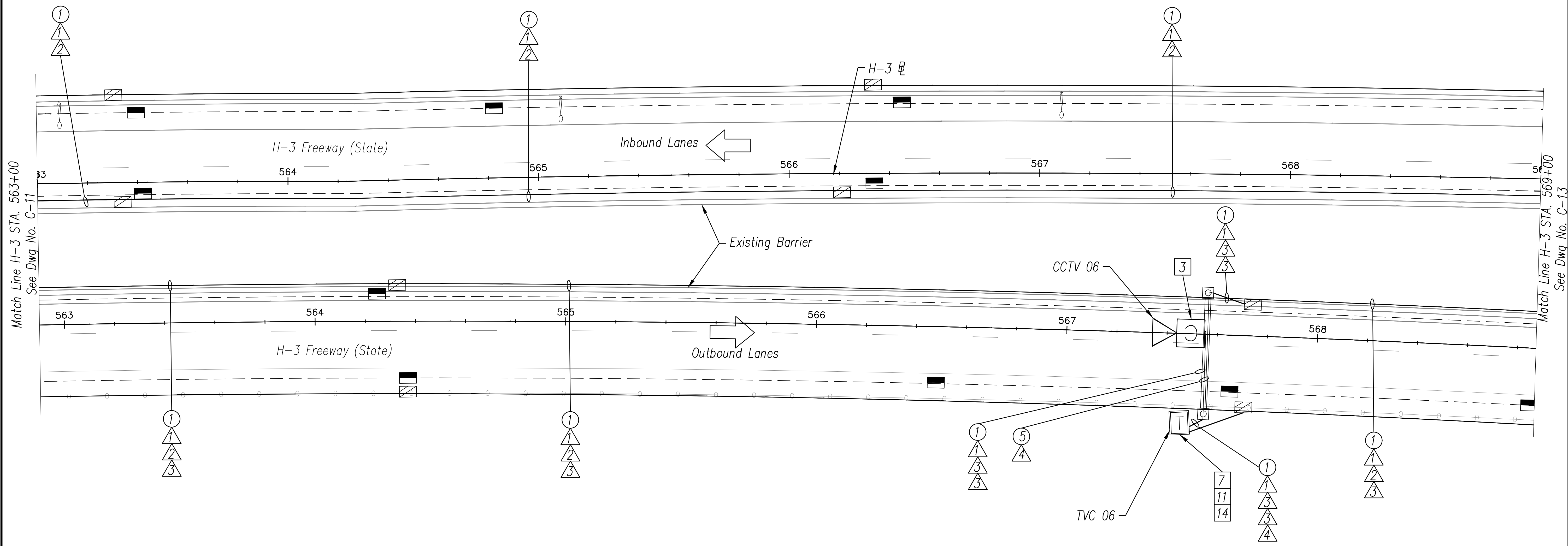
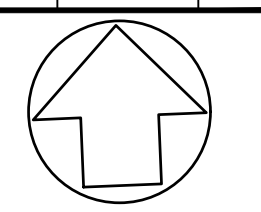
- 3 Install New PTZ CCTV Camera on Existing Sign Bridge Per Sheet C-54
- 7 Install New Layer 2 Ethernet Switch
- 12 Install New Fiber Optic Patch Panel – 24 Port
- 14 Install Fiber Optic Jumper Cables

CABLE NOTES

- 1 Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- 2 Install New 72-Strand SMFO Cable in New Fabric Innerduct
- 3 Install New 12-Strand SMFO Cable in New Fabric Innerduct
- 4 Install New CAT6E Cable in New Fabric Innerduct

CONDUIT NOTES

- 1 Install New Cable and Innerduct In Existing Conduit
- 5 Install Aerial Camera Control Cable



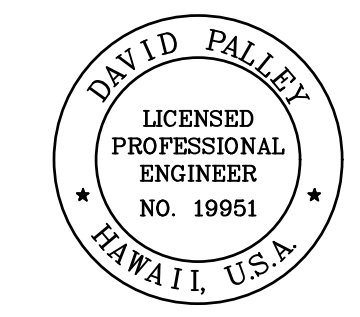
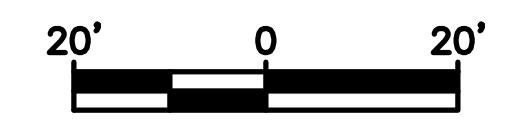
ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.

H-3 FREEWAY – STA 563+00 TO STA 569+00
(BASE BID)

Scale: 1" = 20'



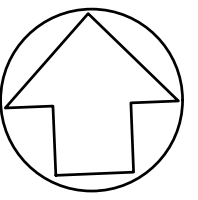
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David Palley
 SIGNATURE 4/20/2028
 EXPIRATION DATE OF LICENSE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
 STA 563+00 TO STA 569+00

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	30	111

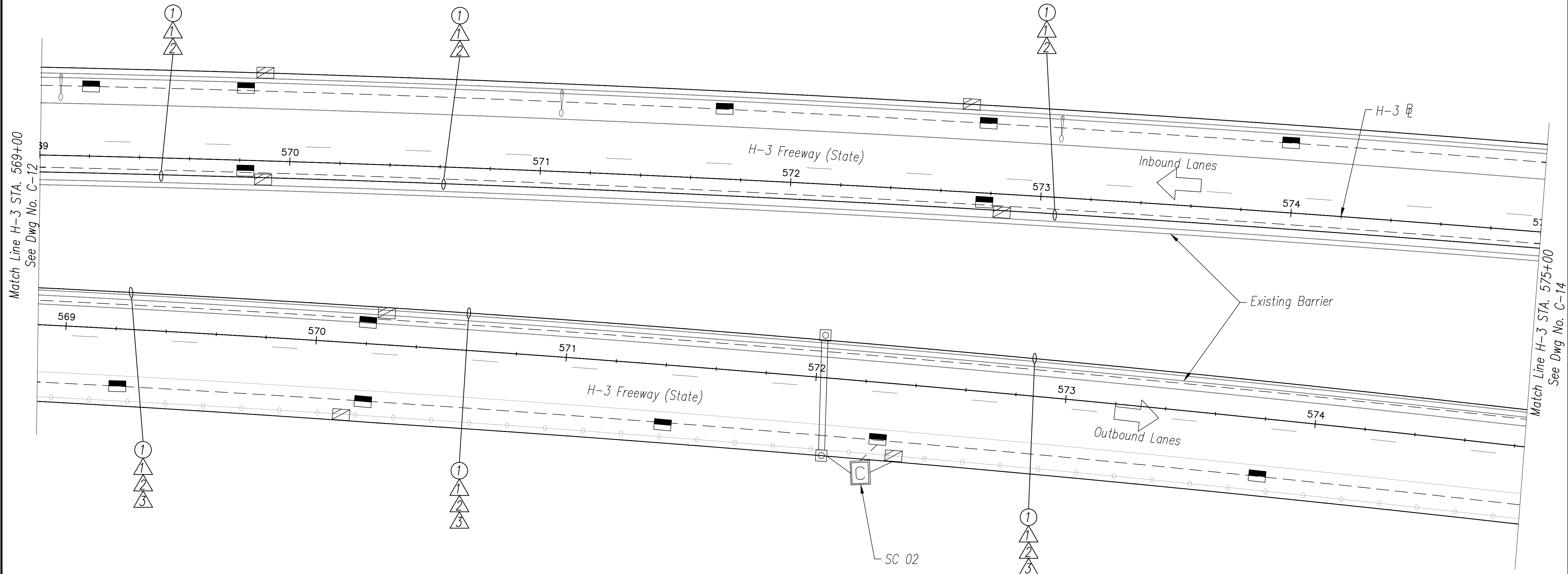


CABLE NOTES

- ① Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- ② Install New 72-Strand SMFO Cable in New Fabric Innerduct
- ③ Install New 12-Strand SMFO Cable in New Fabric Innerduct

CONDUIT NOTES

- ① Install New Cable and Innerduct In Existing Conduit



ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
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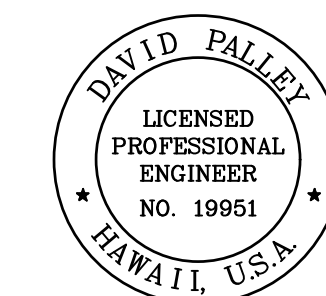
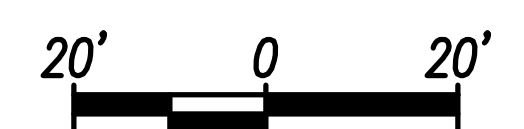
NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.

H-3 FREEWAY - STA 569+00 TO STA 575+00

(BASE BID)

Scale: 1" = 20'



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4/20/2028
EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
STA 569+00 TO STA 575+00

Freeway Management System, Phase 4
Federal Aid Project No. NH-0300(176)R

Scale: As Indicated Date: April 2026

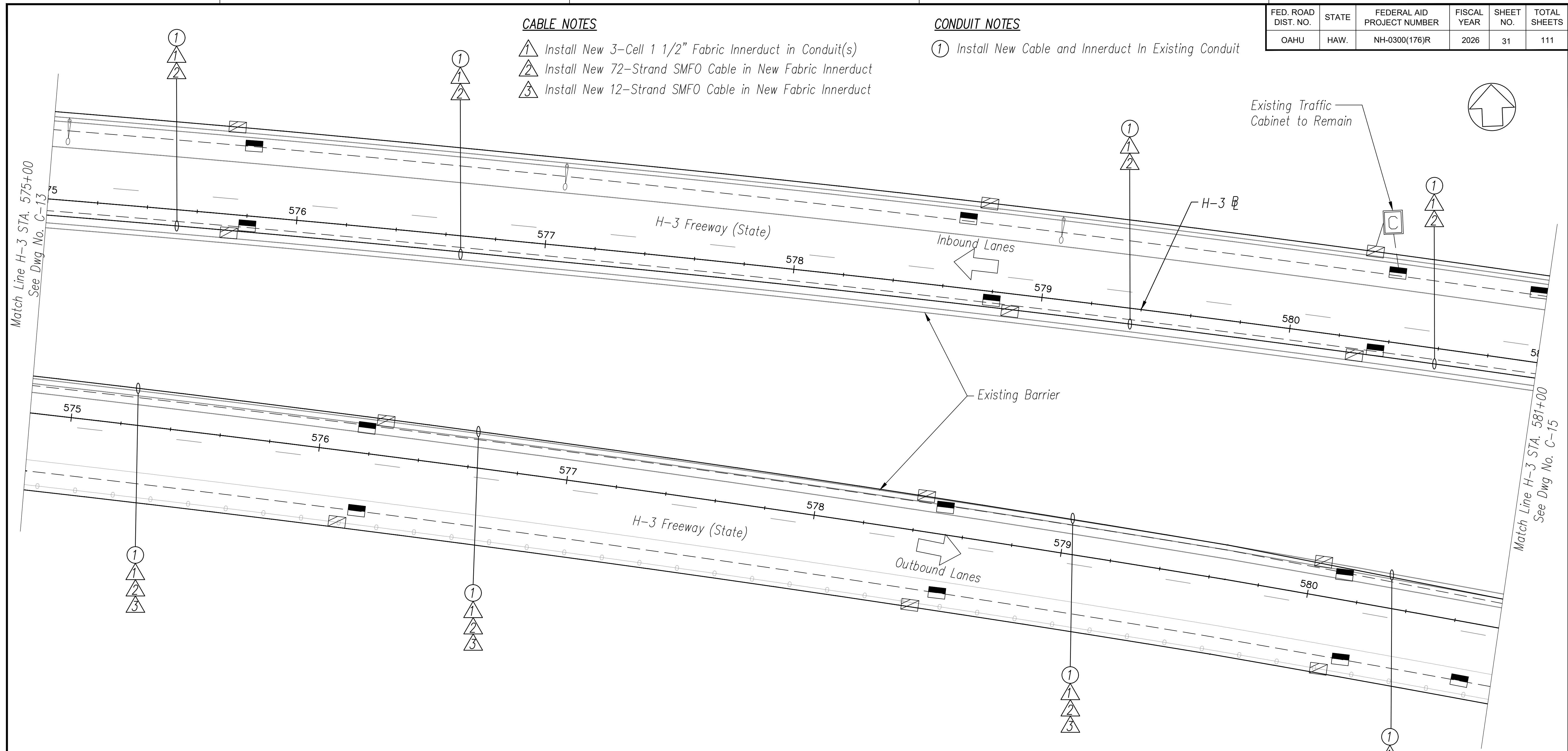
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	31	111

CABLE NOTES

- ① Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- ② Install New 72-Strand SMFO Cable in New Fabric Innerduct
- ③ Install New 12-Strand SMFO Cable in New Fabric Innerduct

CONDUIT NOTES

- ① Install New Cable and Innerduct In Existing Conduit



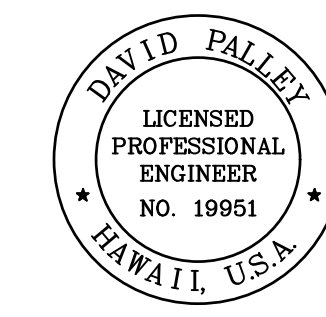
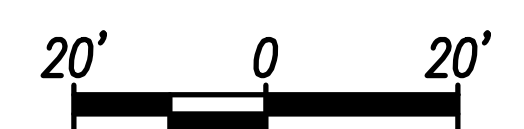
ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
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QUANTITIES BY	
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NOTES:

- Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.

H-3 FREEWAY – STA 575+00 TO STA 581+00
(BASE BID)

Scale: 1" = 20'



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 EXPIRATION DATE OF LICENSE: 4/20/2028

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
 STA 575+00 TO STA 581+00

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

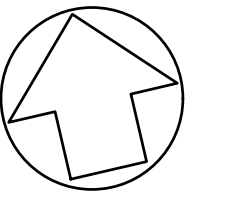
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	32	111

CABLE NOTES

- ① Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- ② Install New 72-Strand SMFO Cable in New Fabric Innerduct
- ③ Install New 12-Strand SMFO Cable in New Fabric Innerduct

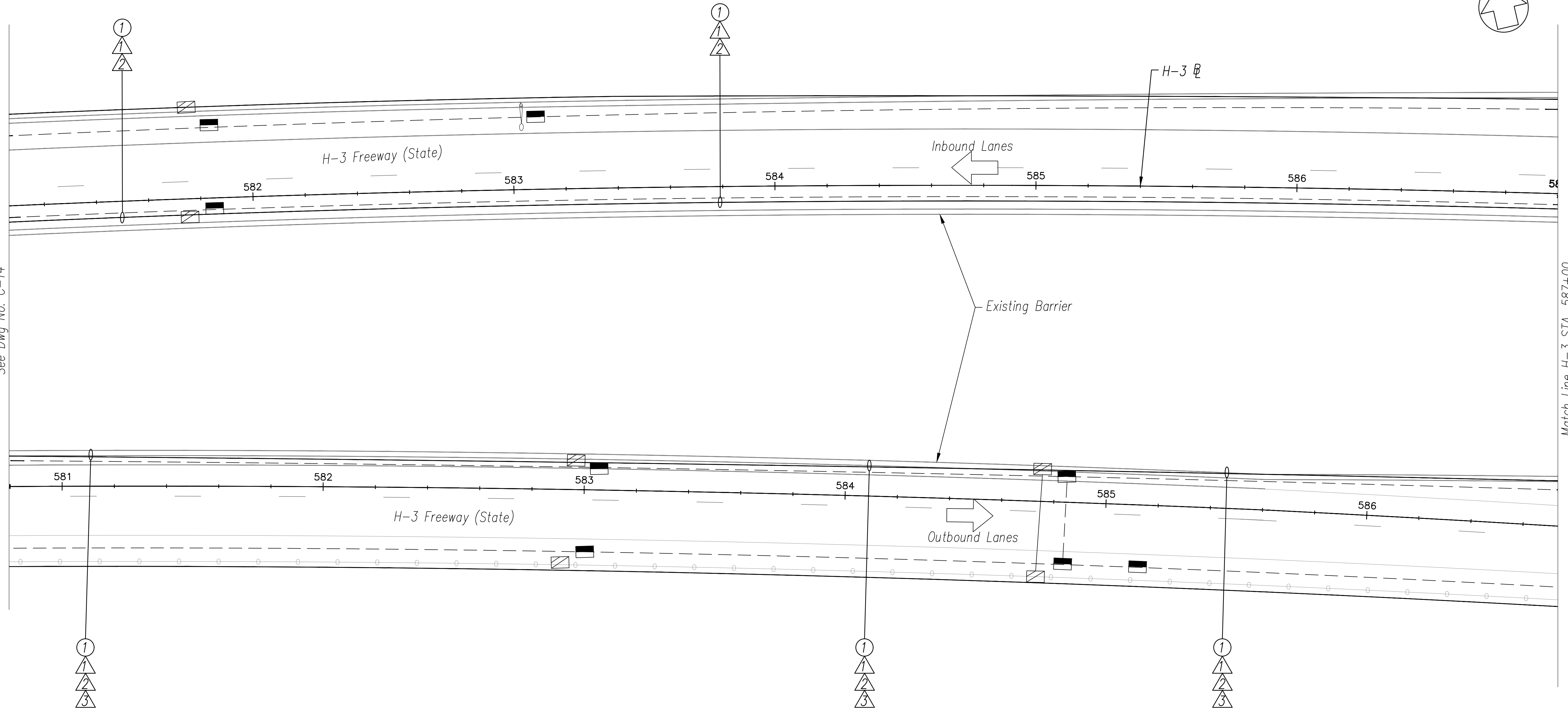
CONDUIT NOTES

- ① Install New Cable and Innerduct In Existing Conduit



Match Line H-3 STA. 581+00
See Dwg No. C-14

Match Line H-3 STA. 587+00
See Dwg No. C-16



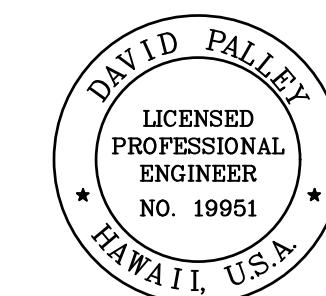
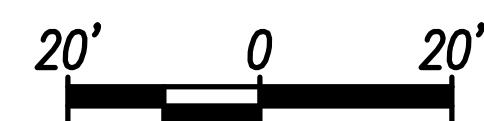
ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.

**H-3 FREEWAY - STA 581+00 TO STA 587+00
(BASE BID)**

Scale: 1" = 20'



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SIGNATURE

4/20/2028
EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
STA 581+00 TO STA 587+00

Freeway Management System, Phase 4
Federal Aid Project No. NH-0300(176)R

Scale: As Indicated Date: April 2026

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	33	111

CONSTRUCTION NOTES

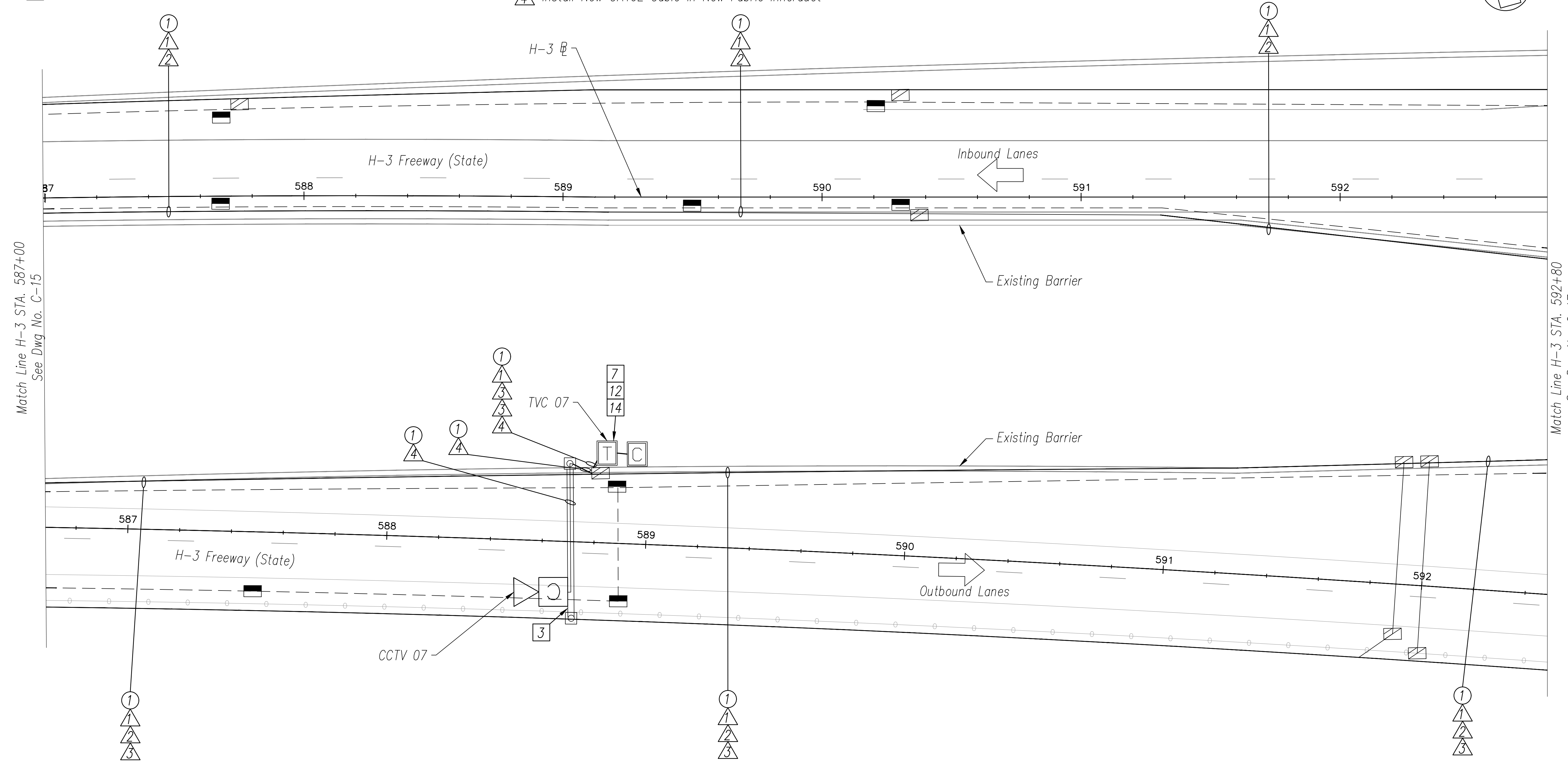
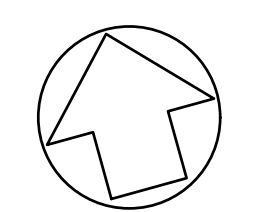
- 3 Install New PTZ CCTV Camera on Existing Sign Bridge Per Sheet C-54
- 7 Install New Layer 2 Ethernet Switch
- 12 Install New Fiber Optic Patch Panel - 24 Port
- 14 Install Fiber Optic Jumper Cables

CABLE NOTES

- 1 Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- 2 Install New 72-Strand SMFO Cable in New Fabric Innerduct
- 3 Install New 12-Strand SMFO Cable in New Fabric Innerduct
- 4 Install New CAT6E Cable in New Fabric Innerduct

CONDUIT NOTES

- 1 Install New Cable and Innerduct In Existing Conduit
- 5 Install Aerial Camera Control Cable



ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
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QUANTITIES BY	
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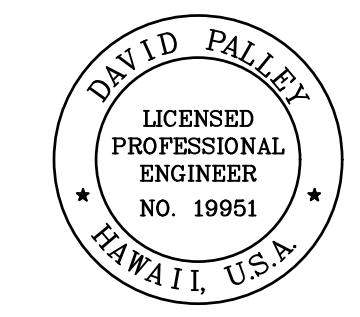
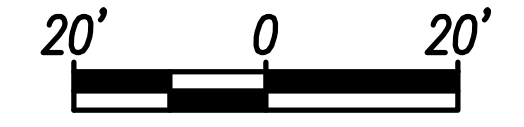
NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.

H-3 FREEWAY - STA 587+00 TO STA 593+00

(BASE BID)

Scale: 1" = 20'



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 Date: 4/20/2028
 Expiration Date of License

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
 STA 587+00 TO STA 593+00

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	34	111

CONSTRUCTION NOTES

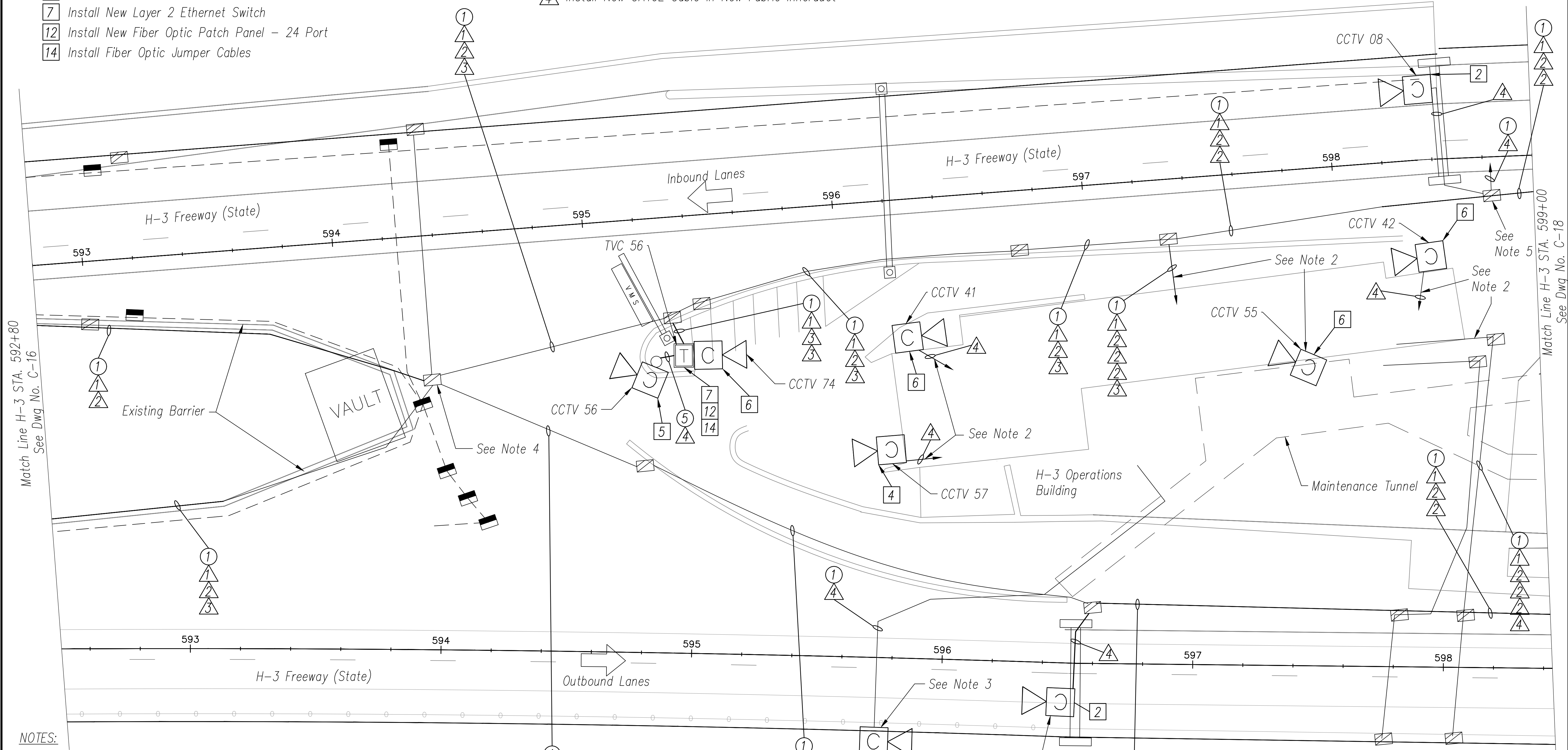
- 2 Install New PTZ CCTV Camera on Existing Tunnel Gantry Per Sheet C-54
- 4 Install New PTZ CCTV Camera New Wall Mount Attachment Per Sheet C-54
- 5 Install New PTZ CCTV Camera on Existing Light Pole Per Sheet C-53
- 6 Install New Fixed CCTV Camera on New Wall Mount Per Sheet C-54
- 7 Install New Layer 2 Ethernet Switch
- 12 Install New Fiber Optic Patch Panel - 24 Port
- 14 Install Fiber Optic Jumper Cables

CABLE NOTES

- 1 Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- 2 Install New 72-Strand SMFO Cable in New Fabric Innerduct
- 3 Install New 12-Strand SMFO Cable in New Fabric Innerduct
- 4 Install New CAT6E Cable in New Fabric Innerduct

CONDUIT NOTES

- 1 Install New Cable and Innerduct In Existing Conduit
- 5 Install Aerial Camera Control Cable

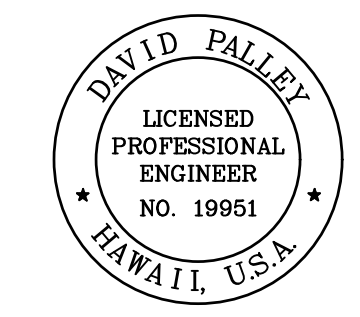
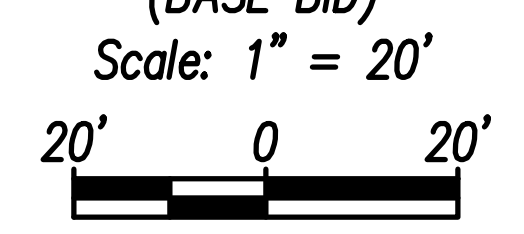


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DESIGNED BY	_____
CHECKED BY	_____
DATE	_____
DESIGNED BY	_____
CHECKED BY	_____
DATE	_____
DESIGNED BY	_____
CHECKED BY	_____

NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.
- 2. Match Existing Cable Routing to Hub 14 in Operations Building.
- 3. Route CCTV control Cable from CCTV 56A (under Outbound Pier) to Hub 14 Via Existing Conduit Connections.
- 4. Store 100 ft Additional Slack Fiber Optic Cable per Direction in JB to Allow Transition to Structure/Barrier Junction Boxes.
- 5. Route Cable from CCTV 08 to New Switch in Hub 9 inside Halawa Portal Building (Inbound).
- 6. Ethernet Cable Length Shall not Exceed 850 LF.

H-3 FREEWAY - STA 593+00 TO STA 599+00
(BASE BID)



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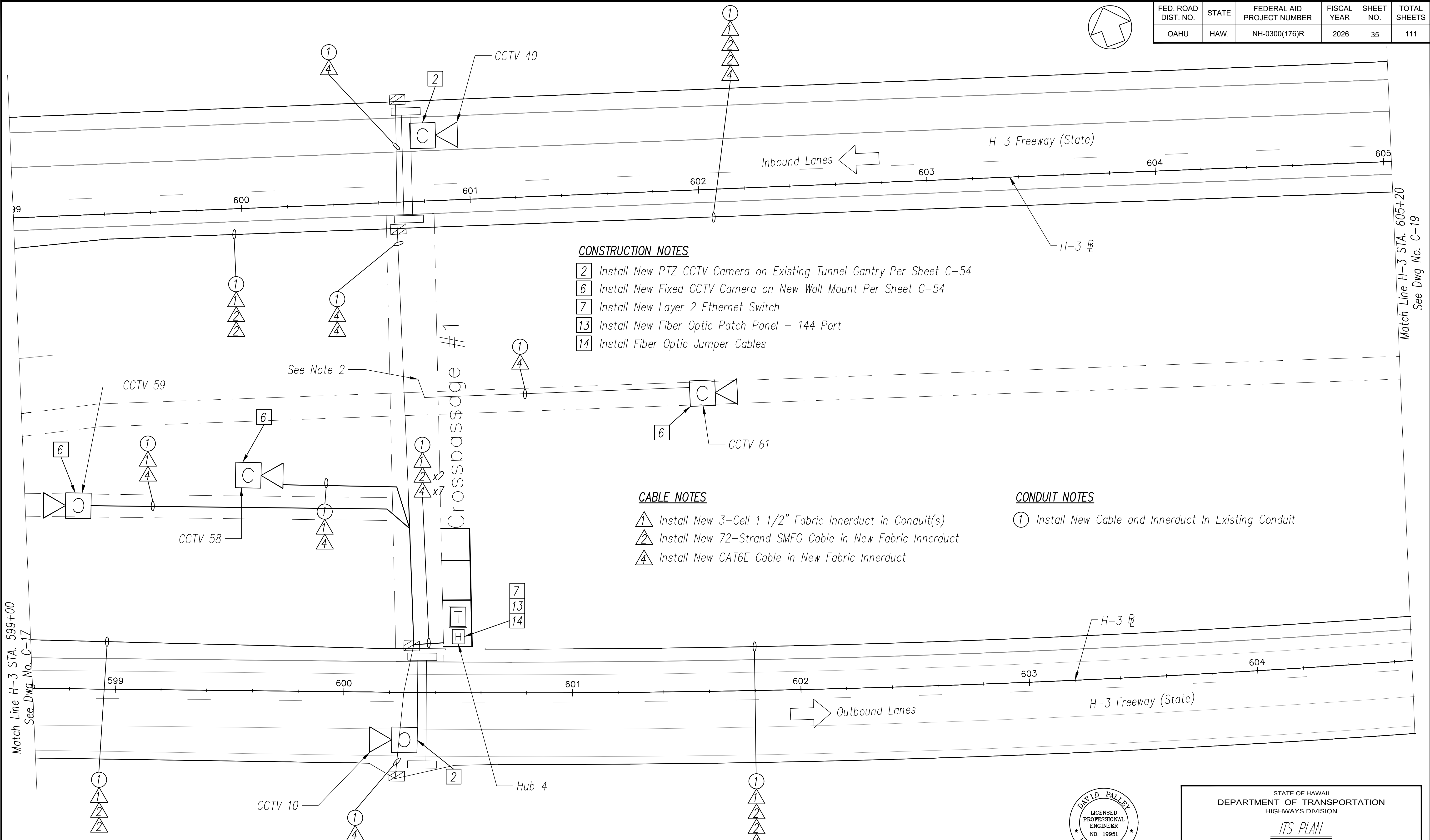
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
STA 593+00 TO STA 599+00

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. C-17 OF 111 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	35	111



CONSTRUCTION NOTES

- 2 Install New PTZ CCTV Camera on Existing Tunnel Gantry Per Sheet C-54
- 6 Install New Fixed CCTV Camera on New Wall Mount Per Sheet C-54
- 7 Install New Layer 2 Ethernet Switch
- 13 Install New Fiber Optic Patch Panel - 144 Port
- 14 Install Fiber Optic Jumper Cables

CABLE NOTES

- 1 Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- 2 Install New 72-Strand SMFO Cable in New Fabric Innerduct
- 4 Install New CAT6E Cable in New Fabric Innerduct

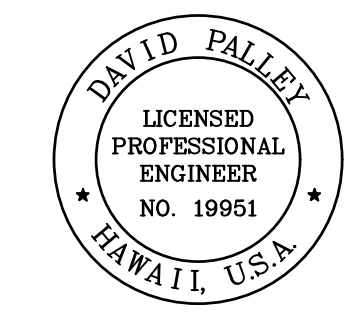
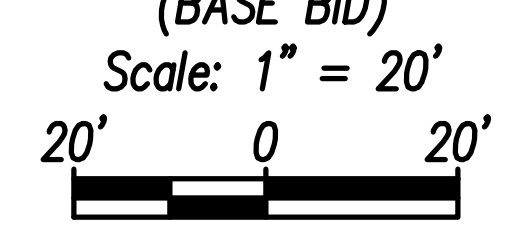
CONDUIT NOTES

- 1 Install New Cable and Innerduct In Existing Conduit

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

- NOTES:**
- Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.
 - Match Existing Conduit Connection to Proposed Ethernet Switch in Existing Crosspassage Hub Cabinet.
 - Ethernet Cable Length Shall Not Exceed 850 LF.

H-3 FREEWAY - STA 599+00 TO STA 605+00



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SIGNATURE

4/20/2028
EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

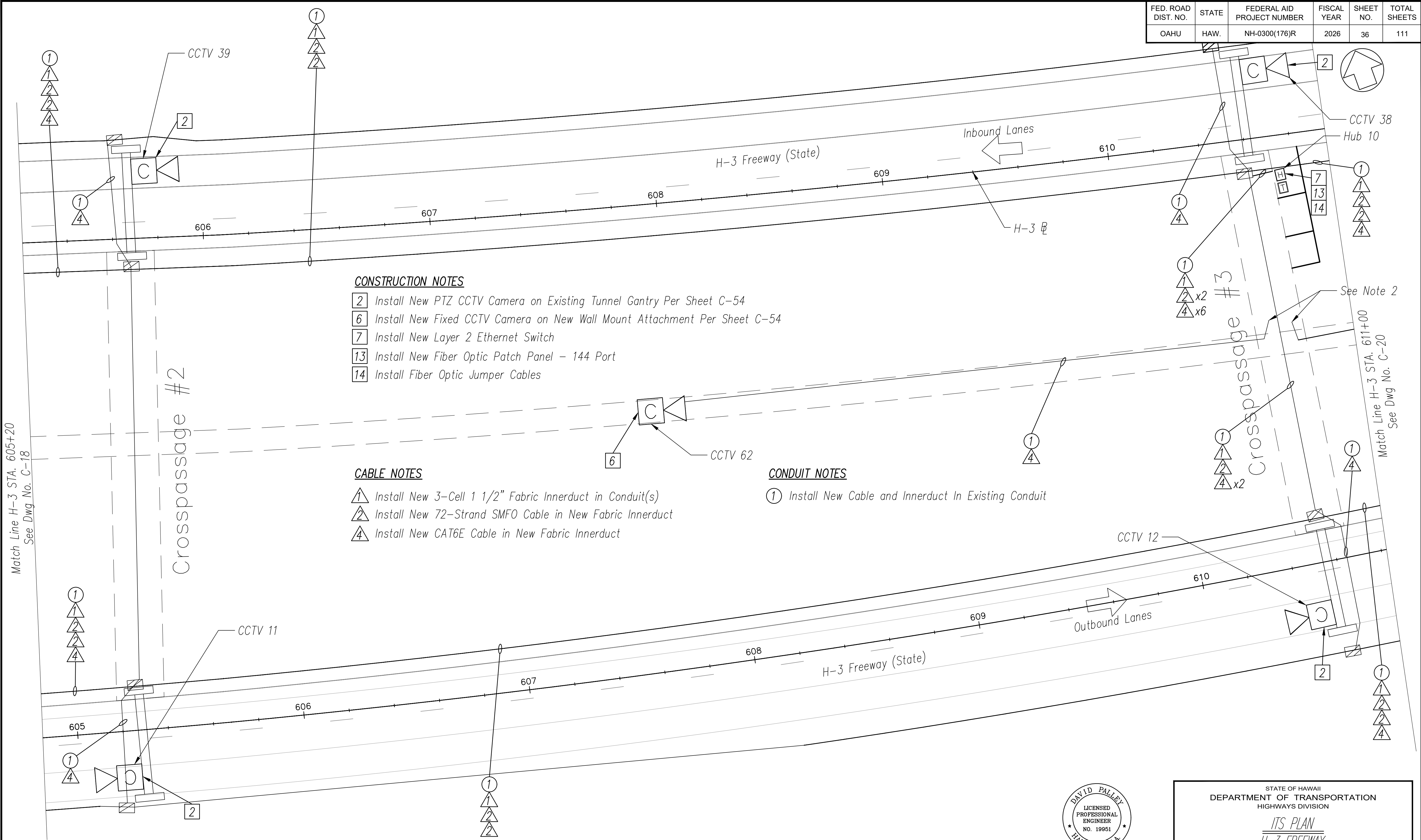
ITS PLAN
H-3 FREEWAY
STA 599+00 TO STA 605+00

Freeway Management System, Phase 4
Federal Aid Project No. NH-0300(176)R

Scale: As Indicated Date: April 2026

SHEET No. C-18 OF 111 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	36	111



CONSTRUCTION NOTES

- 2 Install New PTZ CCTV Camera on Existing Tunnel Gantry Per Sheet C-54
- 6 Install New Fixed CCTV Camera on New Wall Mount Attachment Per Sheet C-54
- 7 Install New Layer 2 Ethernet Switch
- 13 Install New Fiber Optic Patch Panel - 144 Port
- 14 Install Fiber Optic Jumper Cables

CABLE NOTES

- 1 Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- 2 Install New 72-Strand SMFO Cable in New Fabric Innerduct
- 4 Install New CAT6E Cable in New Fabric Innerduct

CONDUIT NOTES

- 1 Install New Cable and Innerduct In Existing Conduit

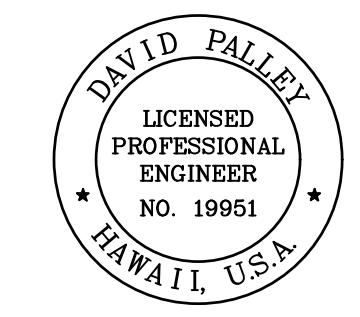
NOTES:

1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.
2. Match Existing Conduit Connection to Proposed Ethernet Switch in Existing Crosspassage Hub Cabinet.
3. Ethernet Cable Shall Not Exceed 850 LF.

H-3 FREEWAY - STA 605+00 TO STA 611+00

(BASE BID)
 Scale: 1" = 20'

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	



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 EXPIRATION DATE OF LICENSE: 4/20/2028

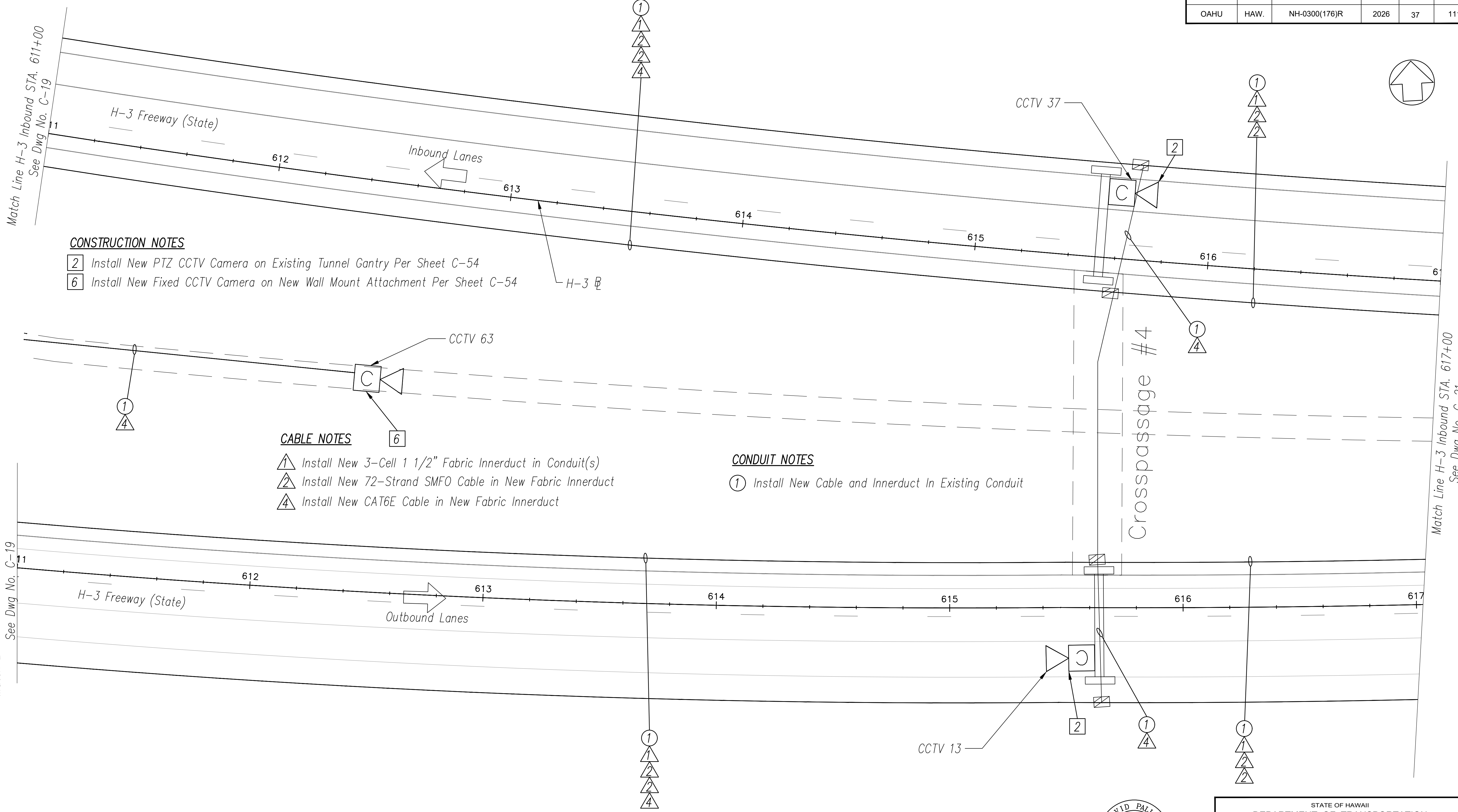
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
 STA 605+00 TO STA 611+00

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. C-19 OF 111 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	37	111



CONSTRUCTION NOTES

- 2 Install New PTZ CCTV Camera on Existing Tunnel Gantry Per Sheet C-54
- 6 Install New Fixed CCTV Camera on New Wall Mount Attachment Per Sheet C-54

CABLE NOTES

- 1 Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- 2 Install New 72-Strand SMFO Cable in New Fabric Innerduct
- 4 Install New CAT6E Cable in New Fabric Innerduct

CONDUIT NOTES

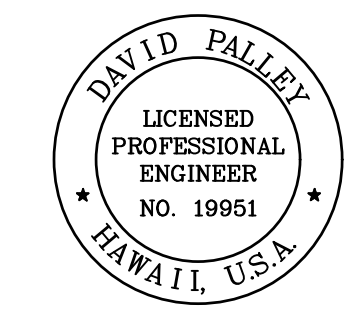
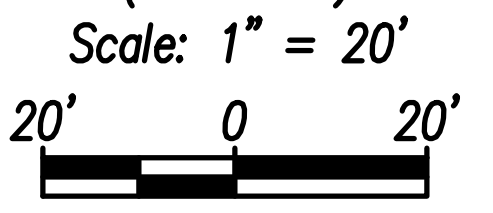
- 1 Install New Cable and Innerduct In Existing Conduit

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.
- 2. Ethernet Cable Shall Not Exceed 850 LF.

H-3 FREEWAY - STA 611+00 TO STA 617+00
(BASE BID)



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

David Palley
SIGNATURE

4/20/2028
EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
STA 611+00 TO STA 617+00

Freeway Management System, Phase 4
Federal Aid Project No. NH-0300(176)R
Scale: As Indicated Date: April 2026

SHEET No. C-20 OF 111 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	38	111

CONSTRUCTION NOTES

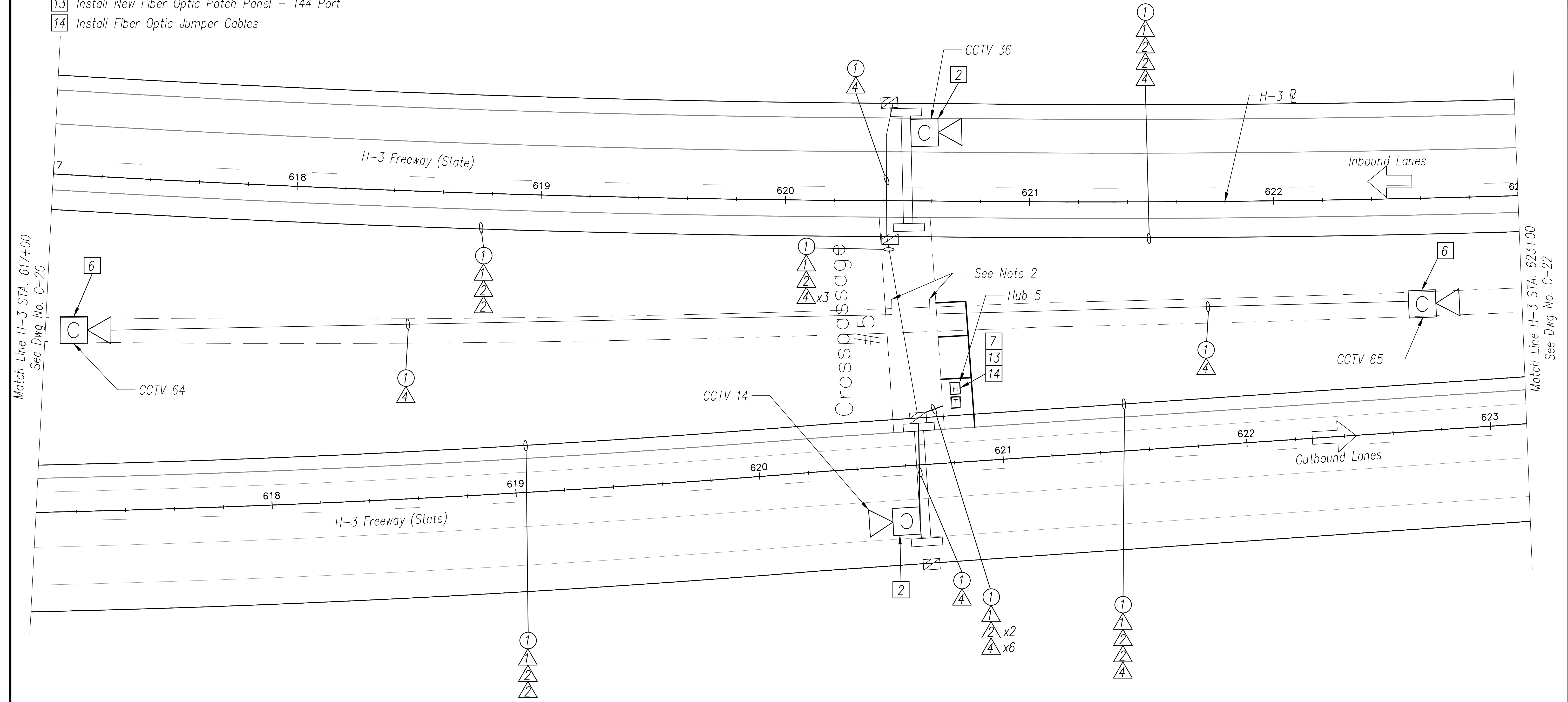
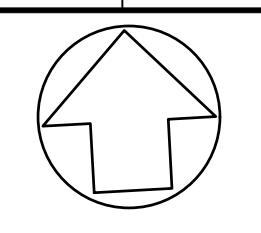
- 2 Install New PTZ CCTV Camera on Existing Tunnel Gantry Per Sheet C-54
- 6 Install New Fixed CCTV Camera on New Wall Mount Attachment Per Sheet C-54
- 7 Install New Layer 2 Ethernet Switch
- 13 Install New Fiber Optic Patch Panel - 144 Port
- 14 Install Fiber Optic Jumper Cables

CABLE NOTES

- 1 Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- 2 Install New 72-Strand SMFO Cable in New Fabric Innerduct
- 4 Install New CAT6E Cable in New Fabric Innerduct

CONDUIT NOTES

- 1 Install New Cable and Innerduct In Existing Conduit

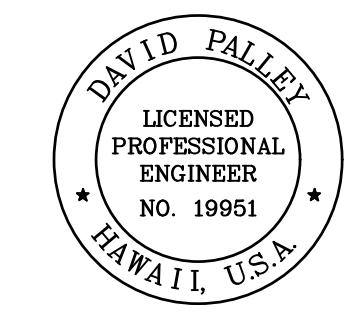
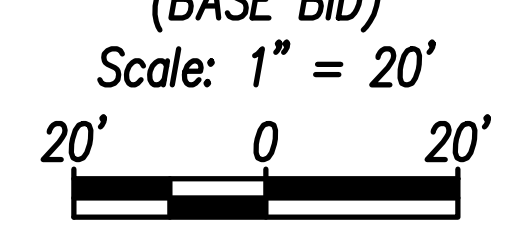


ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.
- 2. Match Existing Conduit Connection to Proposed Ethernet Switch in Existing Crosspassage Hub Cabinet.
- 3. Ethernet Cable Shall Not Exceed 850 LF.

H-3 FREEWAY - STA 617+00 TO STA 623+00
(BASE BID)



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 Signature: *David Palley*
 Date: 4/20/2028
 EXPIRATION DATE OF LICENSE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
 STA 617+00 TO STA 623+00

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. C-21 OF 111 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	39	111

CONSTRUCTION NOTES

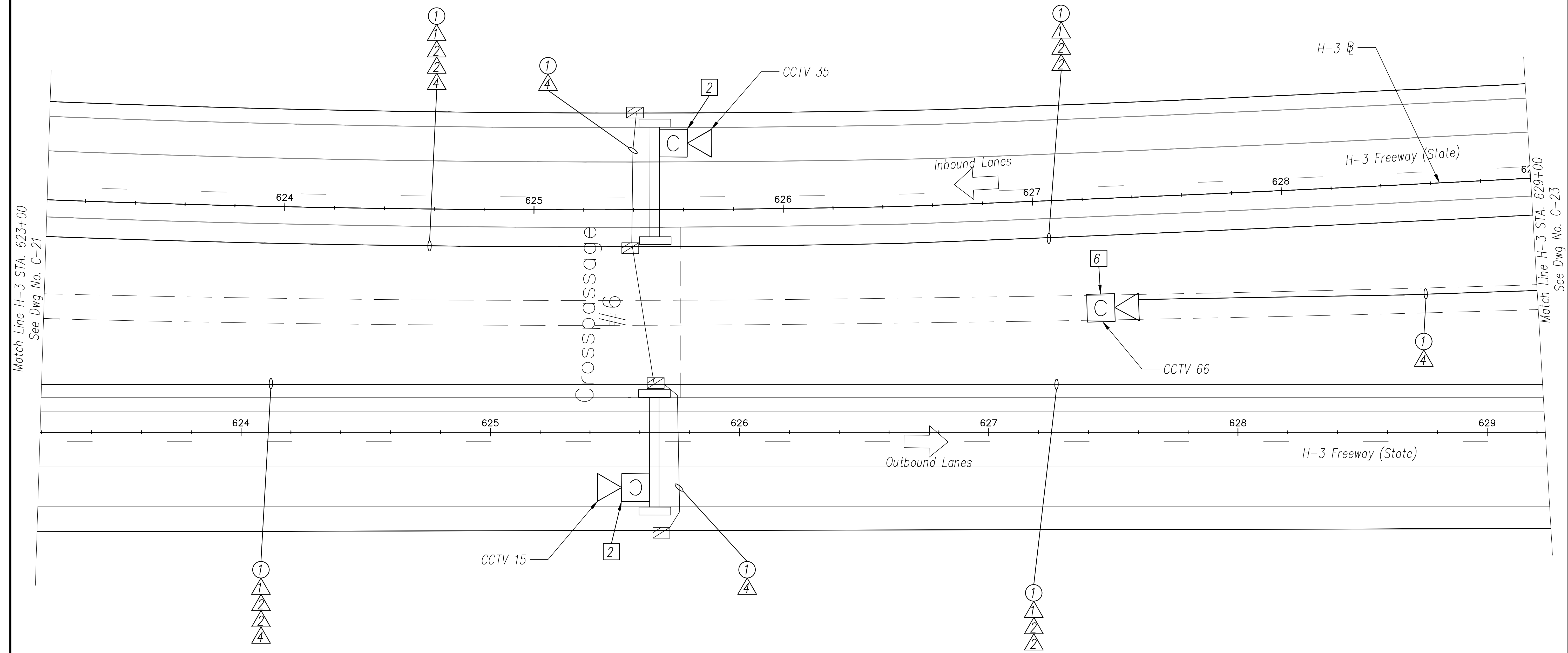
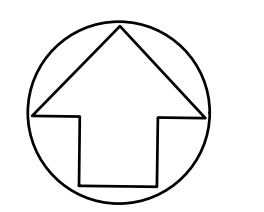
- 2 Install New PTZ CCTV Camera on Existing Tunnel Gantry Per Sheet C-54
- 6 Install New Fixed CCTV Camera on New Wall Mount Attachment Per Sheet C-54

CABLE NOTES

- 1 Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- 2 Install New 72-Strand SMFO Cable in New Fabric Innerduct
- 4 Install New CAT6E Cable in New Fabric Innerduct

CONDUIT NOTES

- 1 Install New Cable and Innerduct In Existing Conduit

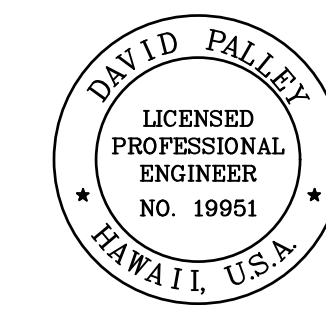
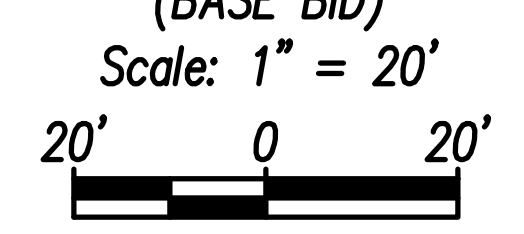


ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.
- 2. Ethernet Cable Length Shall Not Exceed 850 LF.

H-3 FREEWAY - STA 623+00 TO STA 629+00
(BASE BID)



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 EXPIRATION DATE OF LICENSE: 4/20/2028

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
 STA 623+00 TO STA 629+00

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	40	111

CONSTRUCTION NOTES

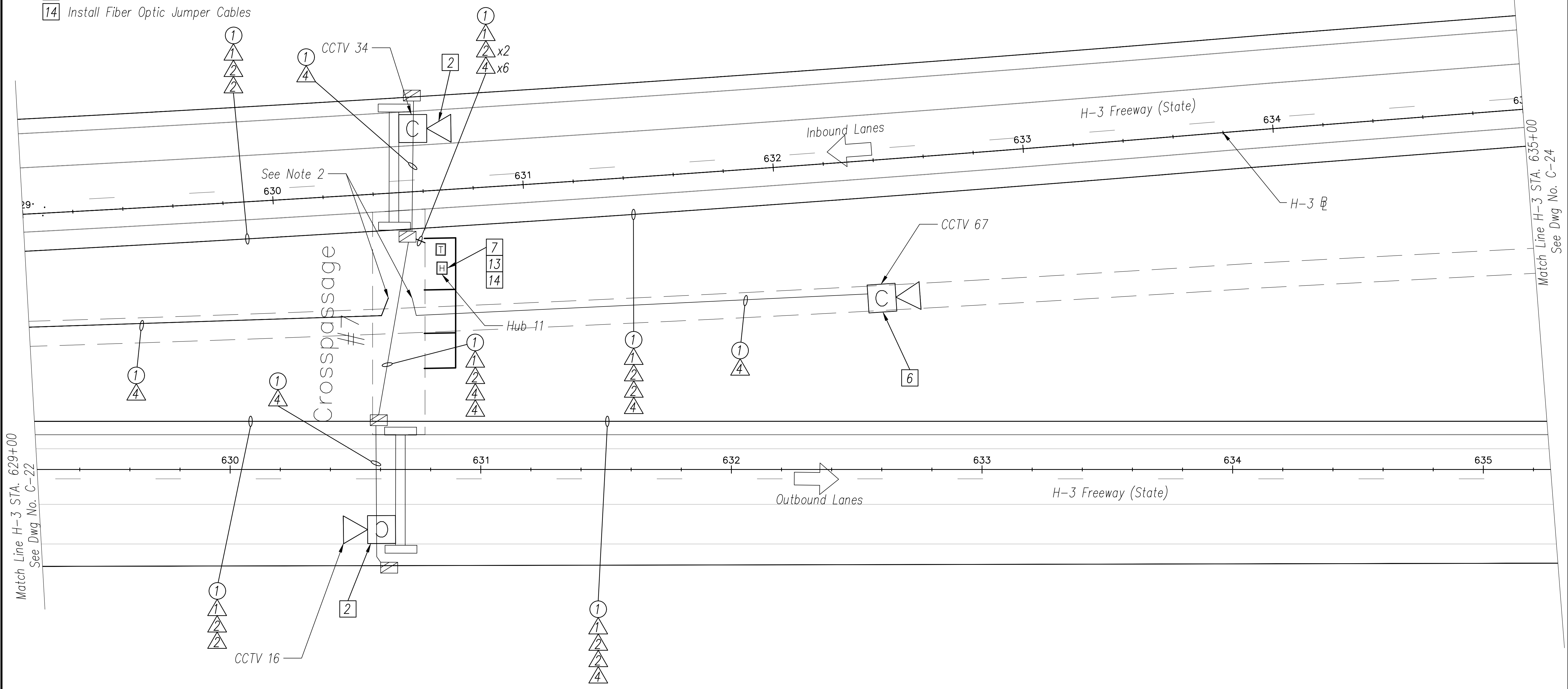
- 2 Install New PTZ CCTV Camera on Existing Tunnel Gantry Per Sheet C-54
- 6 Install New Fixed CCTV Camera on New Wall Mount Attachment Per Sheet C-54
- 7 Install New Layer 2 Ethernet Switch
- 13 Install New Fiber Optic Patch Panel - 144 Port
- 14 Install Fiber Optic Jumper Cables

CABLE NOTES

- 1 Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- 2 Install New 72-Strand SMFO Cable in New Fabric Innerduct
- 4 Install New CAT6E Cable in New Fabric Innerduct

CONDUIT NOTES

- 1 Install New Cable and Innerduct In Existing Conduit



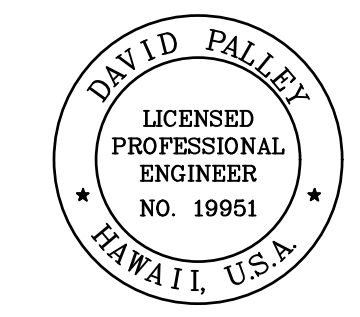
ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.
- 2. Match Existing Conduit Connection to Proposed Ethernet Switch in Existing Crosspassage Hub Cabinet.
- 3. Ethernet Cable Length Shall Not Exceed 850 LF.

H-3 FREEWAY - STA 629+00 TO STA 635+00

(BASE BID)
 Scale: 1" = 20'



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 Date: 4/20/2028
 Expiration Date of License

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
 STA 629+00 TO STA 635+00

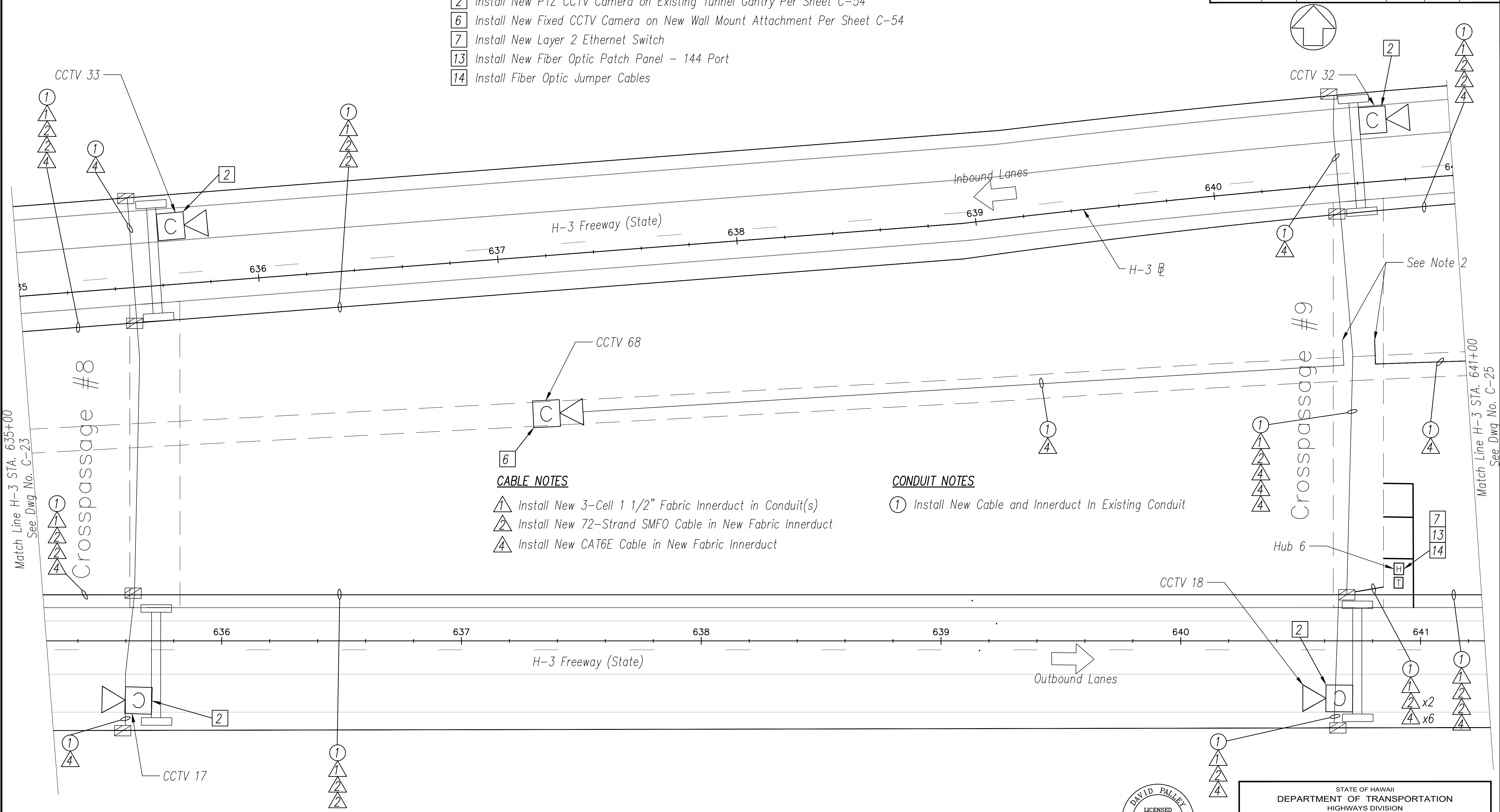
Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. C-23 OF 111 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	41	111

CONSTRUCTION NOTES

- 2 Install New PTZ CCTV Camera on Existing Tunnel Gantry Per Sheet C-54
- 6 Install New Fixed CCTV Camera on New Wall Mount Attachment Per Sheet C-54
- 7 Install New Layer 2 Ethernet Switch
- 13 Install New Fiber Optic Patch Panel - 144 Port
- 14 Install Fiber Optic Jumper Cables



CABLE NOTES

- ① Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- ② Install New 72-Strand SMFO Cable in New Fabric Innerduct
- ④ Install New CAT6E Cable in New Fabric Innerduct

CONDUIT NOTES

- ① Install New Cable and Innerduct In Existing Conduit

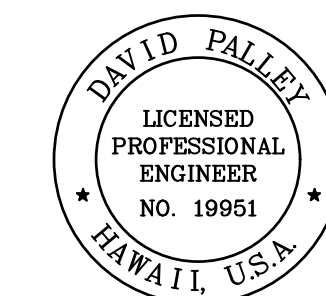
NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.
- 2. Match Existing Conduit Connection to Proposed Ethernet Switch in Existing Crosspassage Hub Cabinet.
- 3. Ethernet Cable Length Shall not Exceed 850 LF.

H-3 FREEWAY - STA 635+00 TO STA 641+00
(BASE BID)

Scale: 1" = 20'
20' 0 20'

ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
QUANTITIES BY	
CHECKED BY	
No.	



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Date: 4/20/2028
Expiration Date of License

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
STA 635+00 TO STA 641+00

Freeway Management System, Phase 4
Federal Aid Project No. NH-0300(176)R
Scale: As Indicated Date: April 2026

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	42	111

CABLE NOTES

- ① Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- ② Install New 72-Strand SMFO Cable in New Fabric Innerduct
- ④ Install New CAT6E Cable in New Fabric Innerduct

CONSTRUCTION NOTES

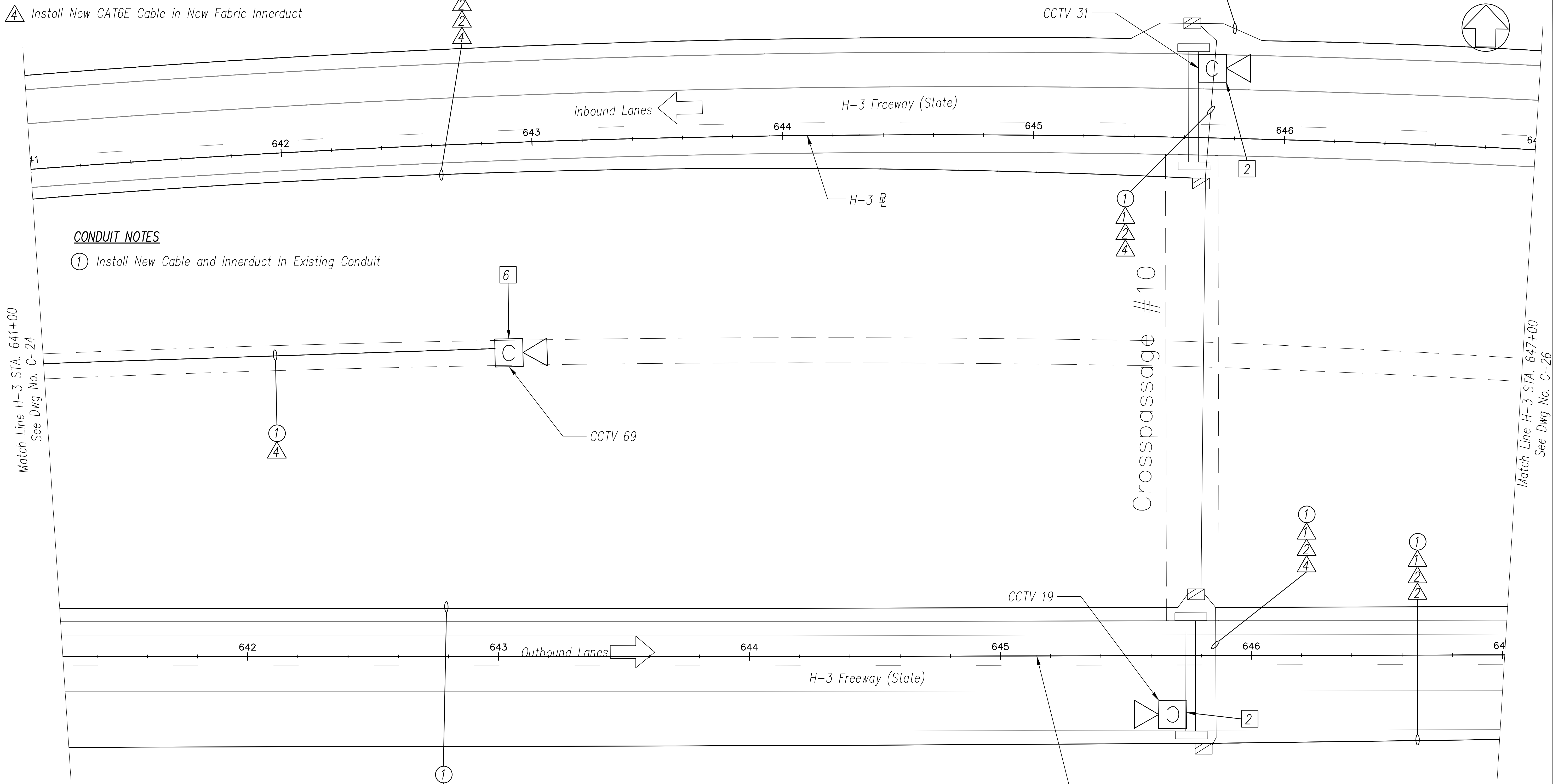
- ② Install New PTZ CCTV Camera on Existing Tunnel Gantry Per Sheet C-54
- ⑥ Install New Fixed CCTV Camera on New Wall Mount Attachment Per Sheet C-54

CONDUIT NOTES

- ① Install New Cable and Innerduct In Existing Conduit

Match Line H-3 STA. 641+00
See Dwg No. C-24

Match Line H-3 STA. 647+00
See Dwg No. C-26

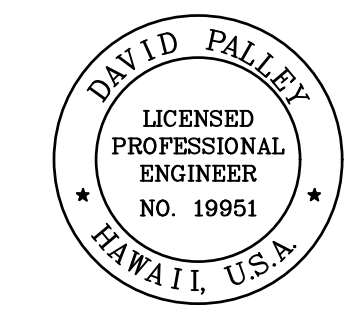
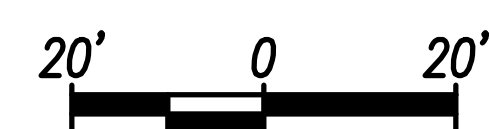


ORIGINAL PLAN	DATE
NO. _____	_____
DESIGNED BY	DATE
QUANTITIES BY	_____
CHECKED BY	_____

NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.
- 2. Ethernet Cable Length Shall Not Exceed 850 LF.

H-3 FREEWAY - STA 641+00 TO STA 647+00
(BASE BID)
Scale: 1" = 20'



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Signature: _____
EXPIRATION DATE OF LICENSE: 4/20/2028

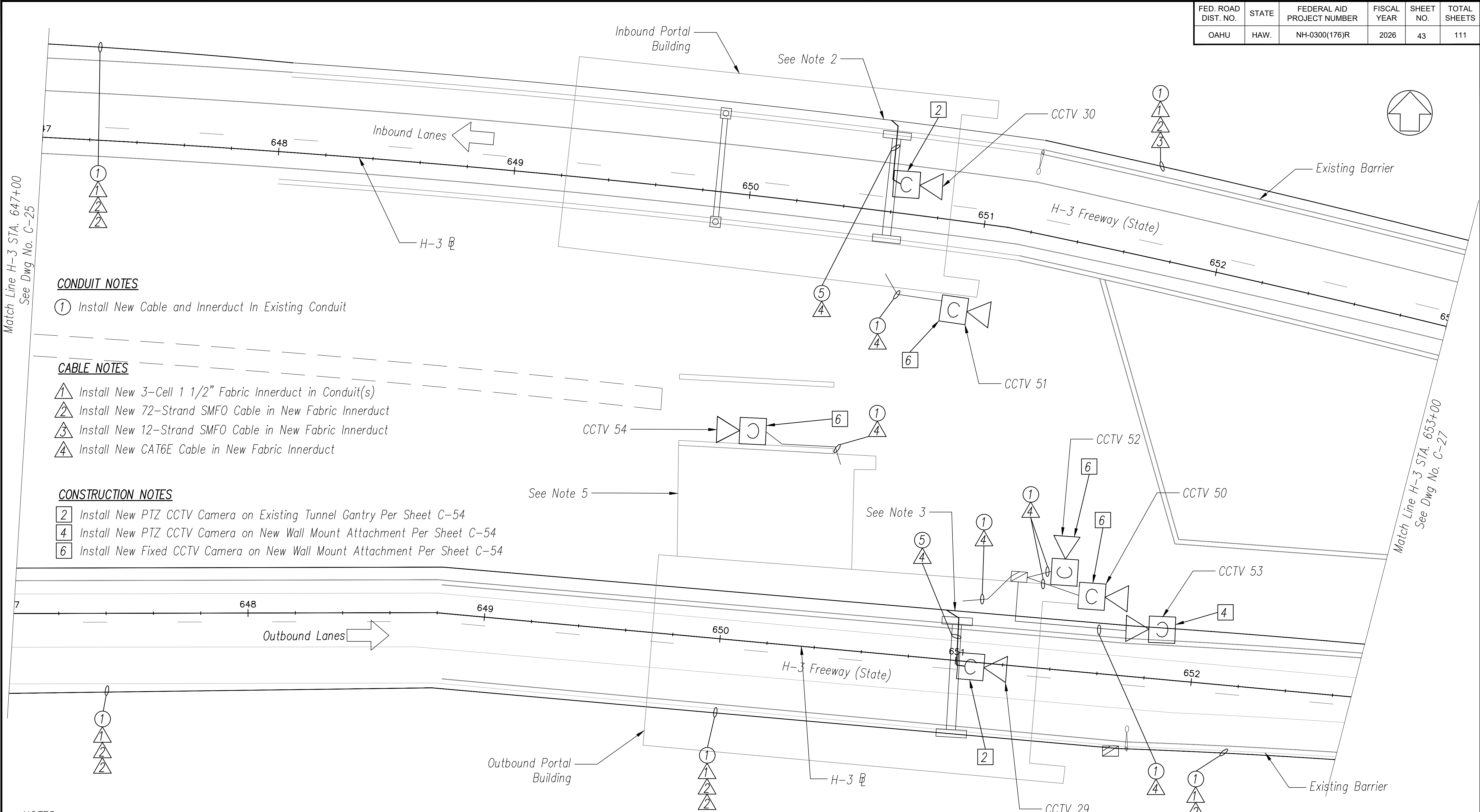
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
STA 641+00 TO STA 647+00

Freeway Management System, Phase 4
Federal Aid Project No. NH-0300(176)R
Scale: As Indicated Date: April 2026

SHEET No. C-25 OF 111 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	43	111



CONDUIT NOTES

- ① Install New Cable and Innerduct In Existing Conduit

CABLE NOTES

- ① Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- ② Install New 72-Strand SMFO Cable in New Fabric Innerduct
- ③ Install New 12-Strand SMFO Cable in New Fabric Innerduct
- ④ Install New CAT6E Cable in New Fabric Innerduct

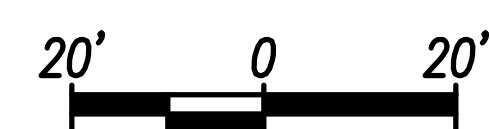
CONSTRUCTION NOTES

- ② Install New PTZ CCTV Camera on Existing Tunnel Gantry Per Sheet C-54
- ④ Install New PTZ CCTV Camera on New Wall Mount Attachment Per Sheet C-54
- ⑥ Install New Fixed CCTV Camera on New Wall Mount Attachment Per Sheet C-54

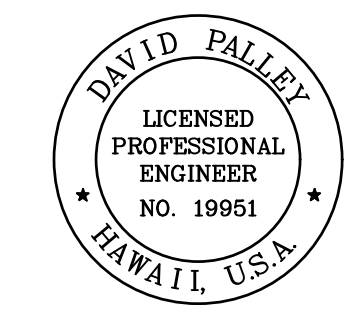
NOTES:

1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.
2. Route CCTV Control Cable and MMFO Drop Cable to Hub 12 in Haiku Inbound Portal Building. Match Existing Cable Routing Through Building.
3. Route CCTV Control Cable to Hub 7 in Haiku Outbound Portal Building. Match Existing Cable Routing Through Building.
4. Replace in Kind CCTV 54 In Haiku Maintenance Building.
5. Replace Existing Javelin Workstation with New Cameleon Workstation.
6. Ethernet Cable Length Shall Not Exceed 850 LF.

H-3 FREEWAY – STA 647+00 TO STA 653+00
 (BASE BID)
 Scale: 1" = 20'



ORIGINAL PLAN	DATE
DESIGNED BY	
CHECKED BY	
QUANTITIES BY	
NO.	



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 SIGNATURE: *David Palley*
 EXPIRATION DATE OF LICENSE: 4/20/2028

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
 STA 647+00 TO STA 653+00

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. C-26 OF 111 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	44	111

CONSTRUCTION NOTES

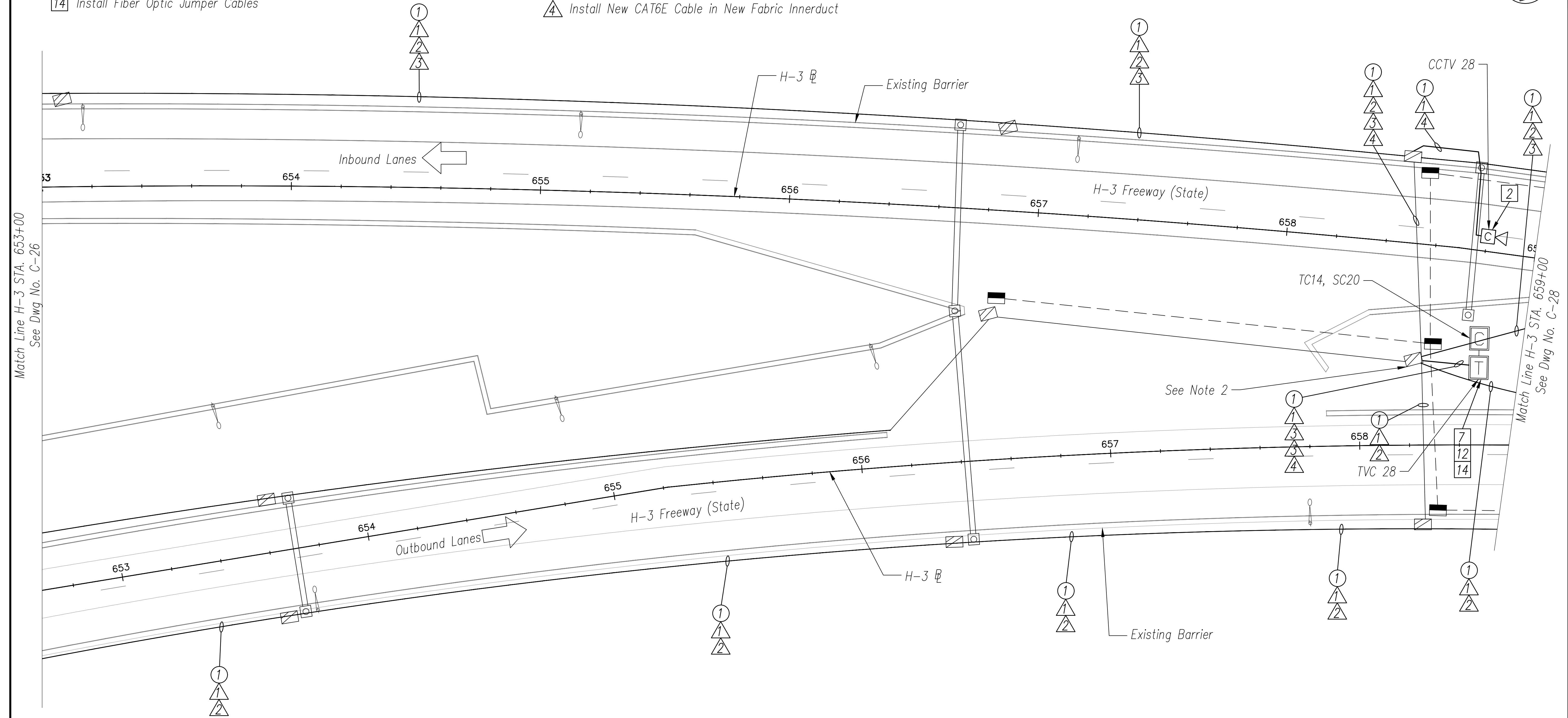
- 2 Install New PTZ CCTV Camera on Existing Tunnel Gantry Per Sheet C-54
- 7 Install New Layer 2 Ethernet Switch
- 12 Install New Fiber Optic Patch Panel – 24 Port
- 14 Install Fiber Optic Jumper Cables

CABLE NOTES

- 1 Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- 2 Install New 72-Strand SMFO Cable in New Fabric Innerduct
- 3 Install New 12-Strand SMFO Cable in New Fabric Innerduct
- 4 Install New CAT6E Cable in New Fabric Innerduct

CONDUIT NOTES

- 1 Install New Cable and Innerduct In Existing Conduit



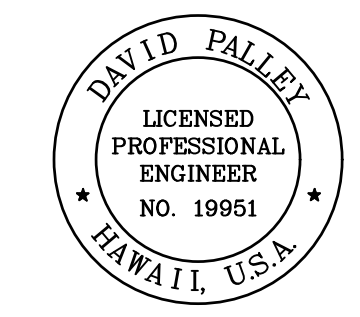
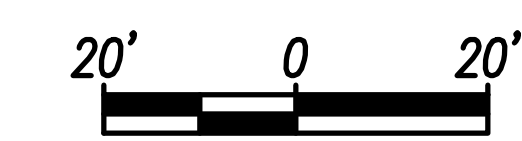
ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.
- 2. Store 100 ft Additional Slack Fiber Optic Cable Per Direction in JB to Allow Transition to Structure/Barrier Junction Boxes.

H-3 FREEWAY – STA 653+00 TO STA 659+00

(BASE BID)
Scale: 1" = 20'



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David Palley
 SIGNATURE 4/20/2028
 EXPIRATION DATE OF LICENSE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
 STA 653+00 TO STA 659+00

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. C-27 OF 111 SHEETS

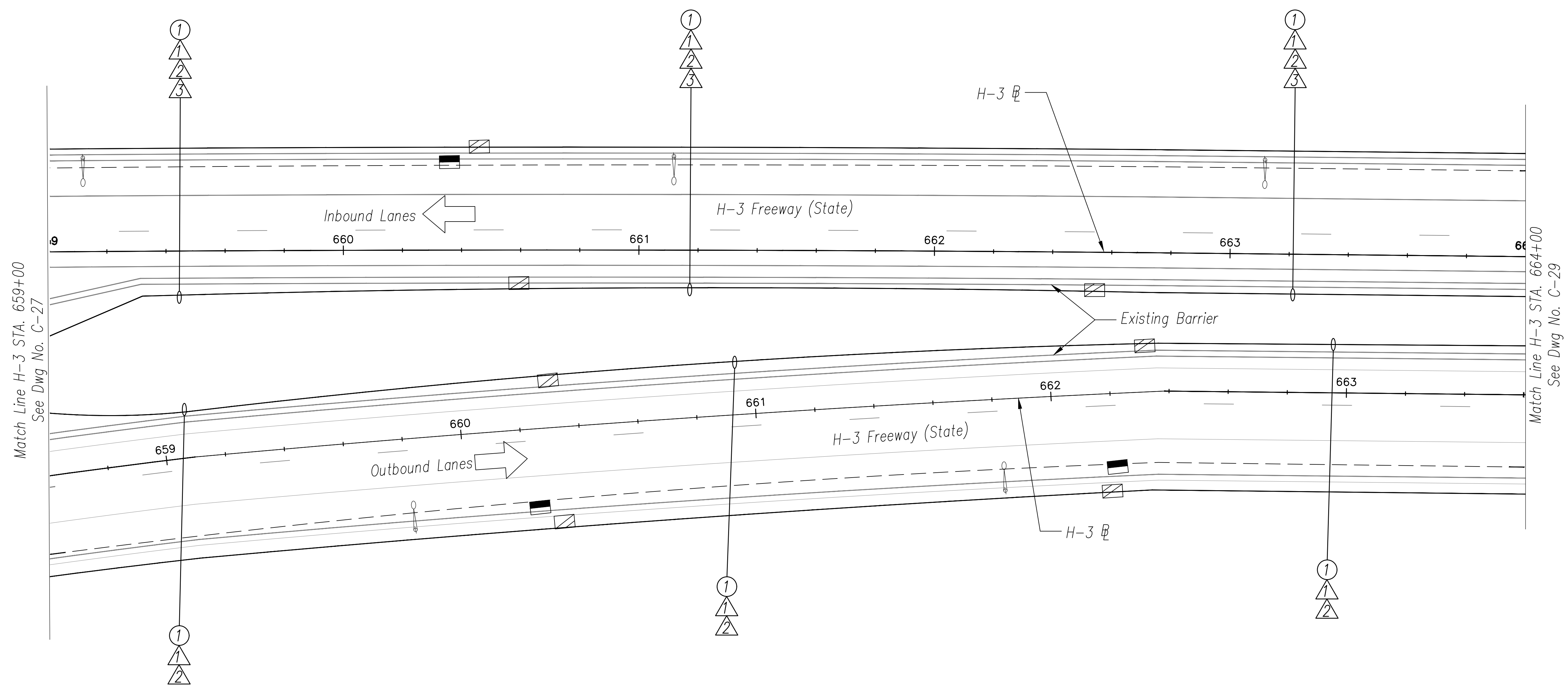
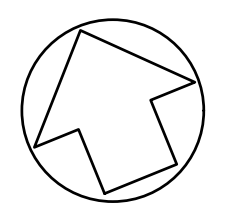
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	45	111

CABLE NOTES

- ① Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- ② Install New 72-Strand SMFO Cable in New Fabric Innerduct
- ③ Install New 12-Strand SMFO Cable in New Fabric Innerduct

CONDUIT NOTES

- ① Install New Cable and Innerduct In Existing Conduit

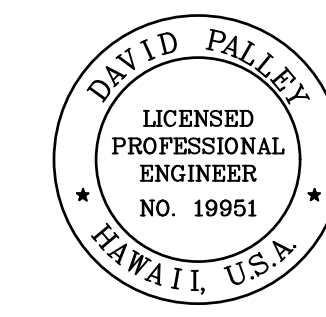
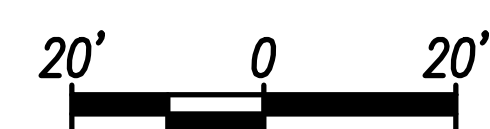


ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.

H-3 FREEWAY - STA 659+00 TO STA 664+00
 (BASE BID)
 Scale: 1" = 20'



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 EXPIRATION DATE OF LICENSE: 4/20/2028

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
 STA 659+00 TO STA 664+00

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. C-28 OF 111 SHEETS

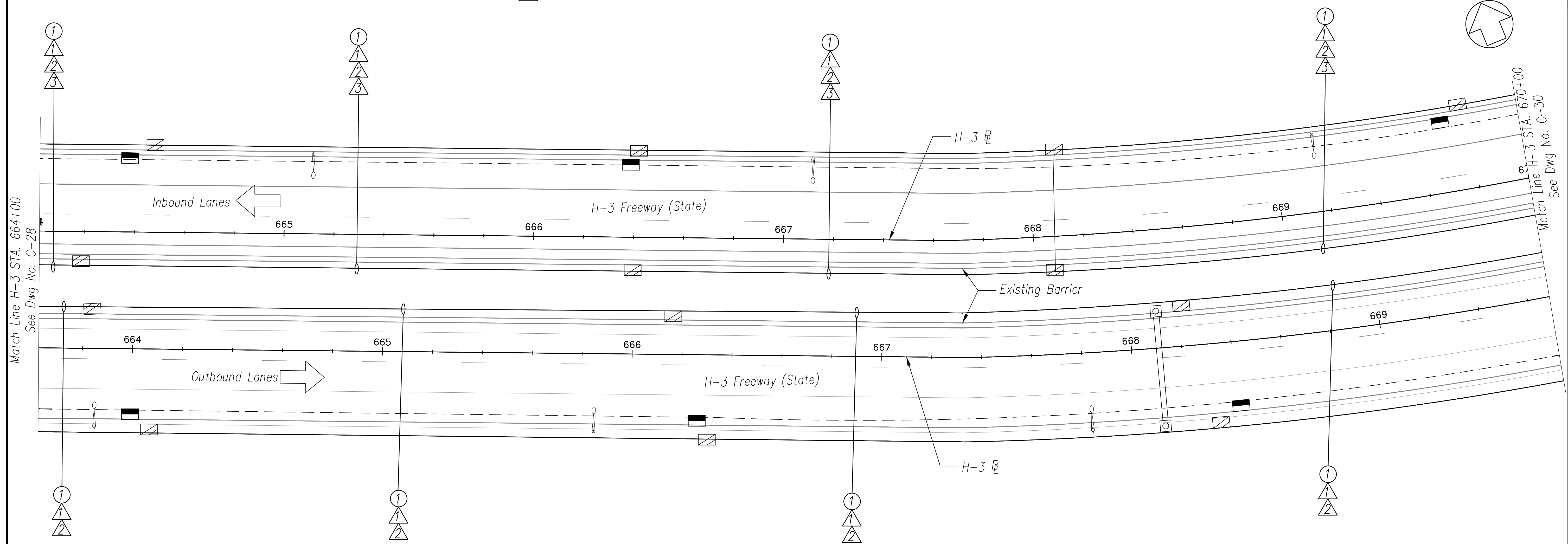
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	46	111

CABLE NOTES

- ① Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- ② Install New 72-Strand SMFO Cable in New Fabric Innerduct
- ③ Install New 12-Strand SMFO Cable in New Fabric Innerduct

CONDUIT NOTES

- ① Install New Cable and Innerduct In Existing Conduit



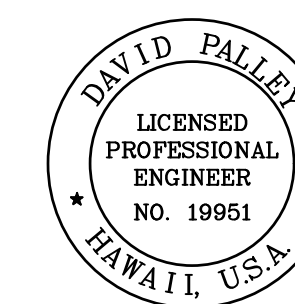
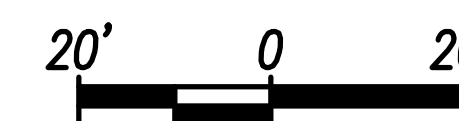
ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.

H-3 FREEWAY - STA 664+00 TO STA 670+00

(BASE BID)
Scale: 1" = 20'



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
STA 664+00 TO STA 670+00

Freeway Management System, Phase 4
Federal Aid Project No. NH-0300(176)R
Scale: As Indicated Date: April 2026

SHEET No. C-29 OF 111 SHEETS

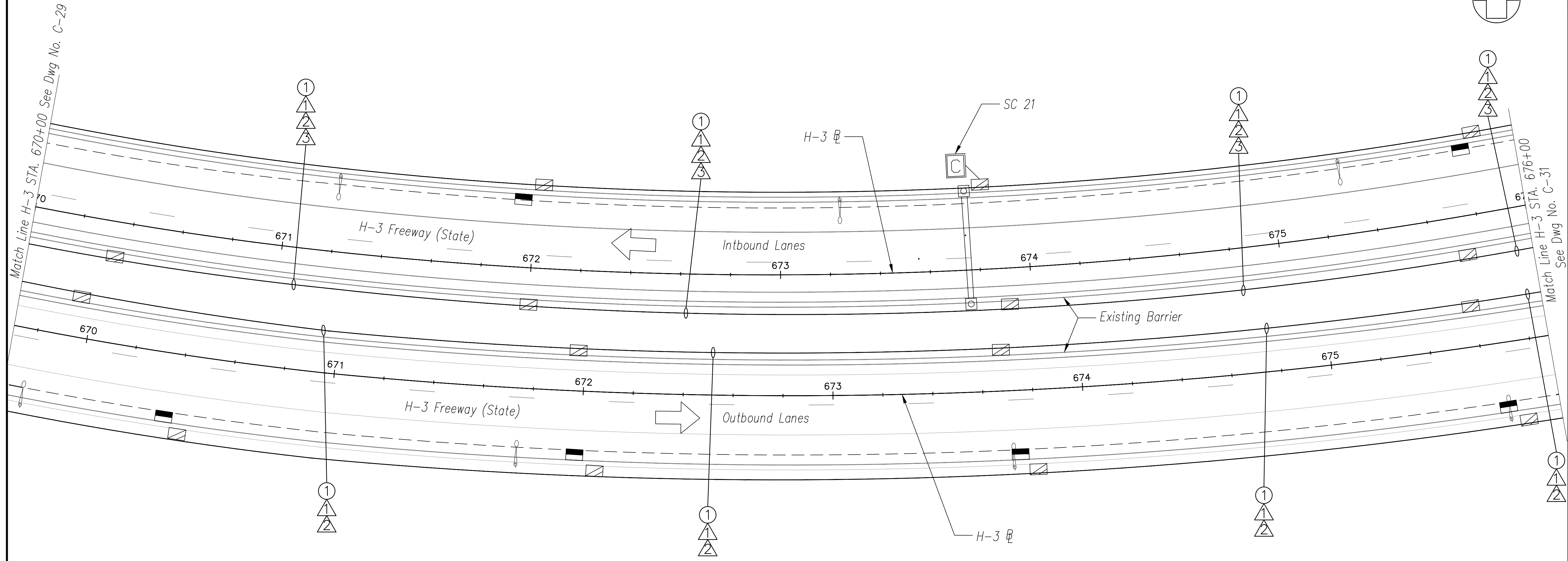
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	47	111

CABLE NOTES

- ① Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- ② Install New 72-Strand SMFO Cable in New Fabric Innerduct
- ③ Install New 12-Strand SMFO Cable in New Fabric Innerduct

CONDUIT NOTES

- ① Install New Cable and Innerduct In Existing Conduit



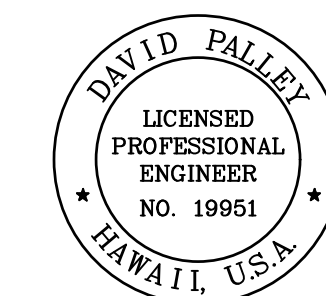
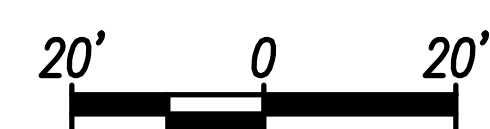
ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.

H-3 FREEWAY - STA 670+00 TO STA 676+00

(BASE BID)
Scale: 1" = 20'



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 Signature: *David Palley*
 EXPIRATION DATE OF LICENSE: 4/20/2028

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
 STA 670+00 TO STA 676+00

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. C-30 OF 111 SHEETS

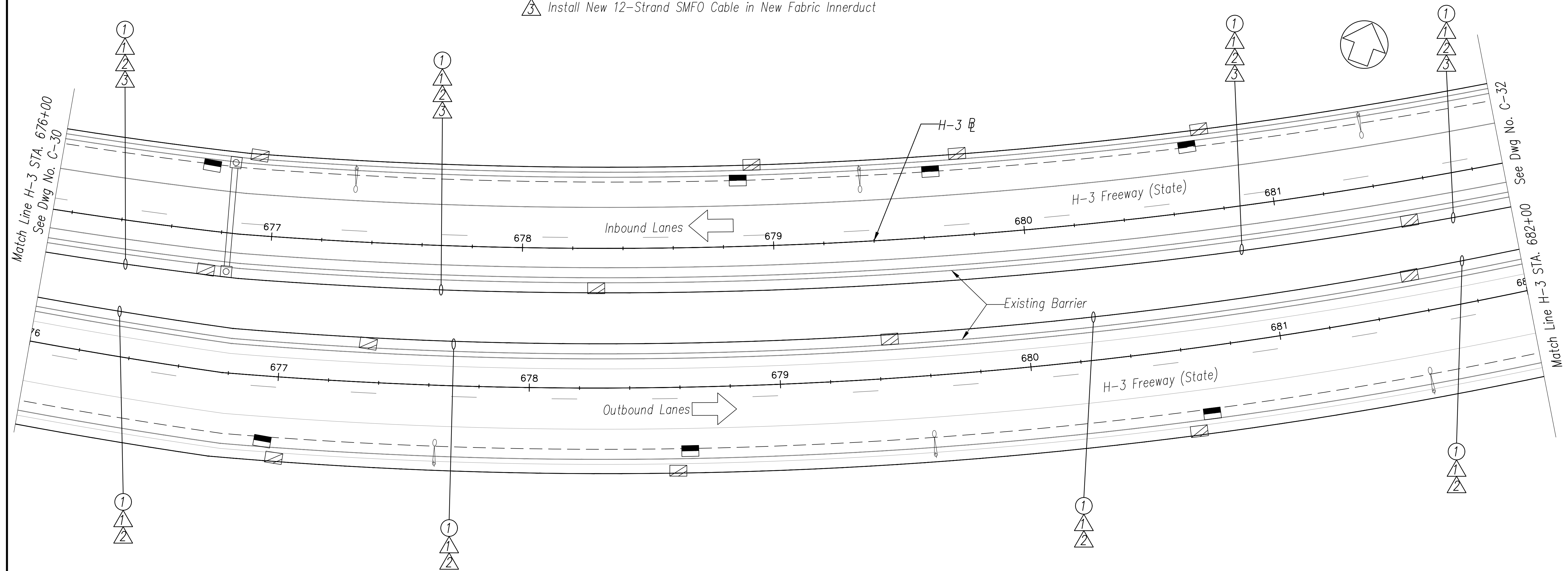
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	48	111

CABLE NOTES

- ① Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- ② Install New 72-Strand SMFO Cable in New Fabric Innerduct
- ③ Install New 12-Strand SMFO Cable in New Fabric Innerduct

CONDUIT NOTES

- ① Install New Cable and Innerduct In Existing Conduit



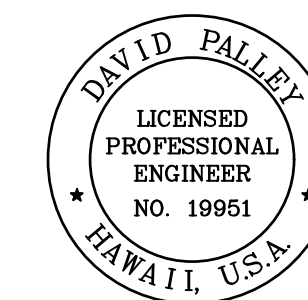
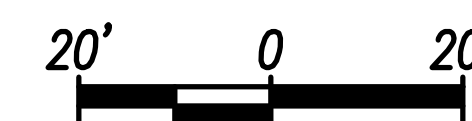
ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

NOTES:

- Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.

H-3 FREEWAY - STA 676+00 TO STA 682+00

(BASE BID)
Scale: 1" = 20'



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EXPIRATION DATE OF LICENSE: 4/20/2028

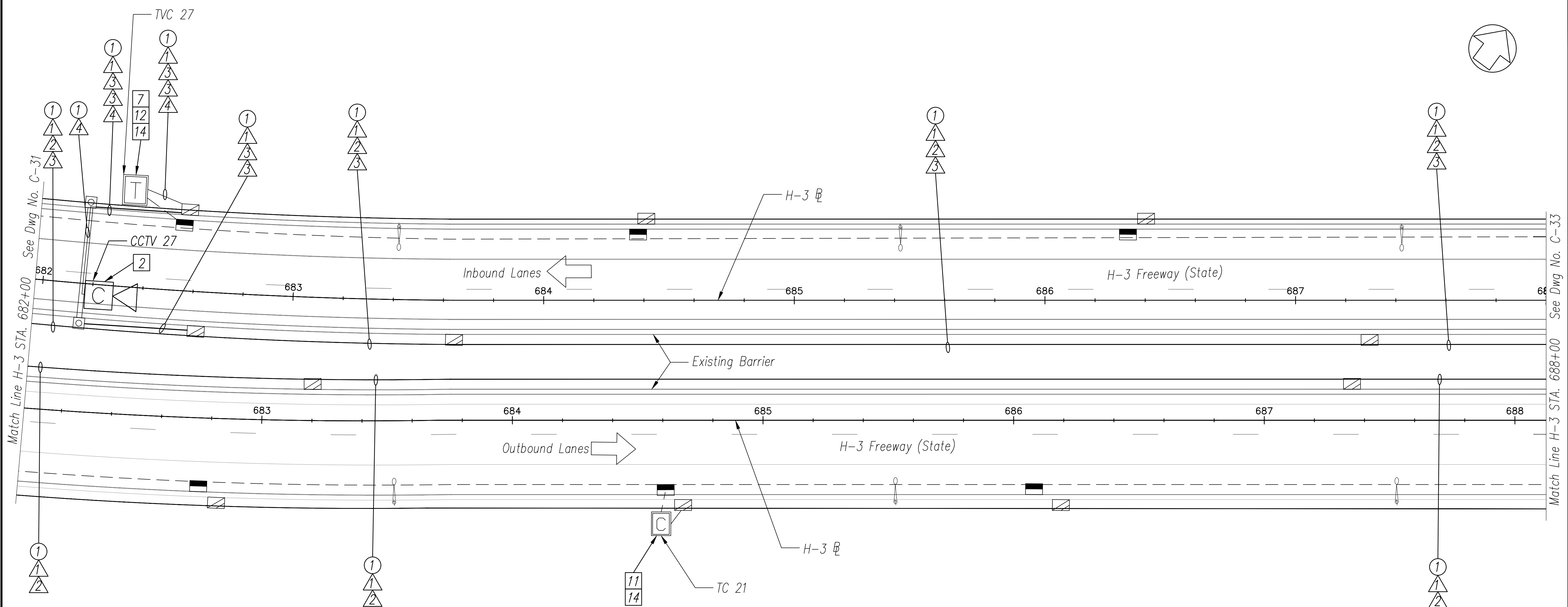
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
STA 676+00 TO STA 682+00

Freeway Management System, Phase 4
Federal Aid Project No. NH-0300(176)R
Scale: As Indicated Date: April 2026

SHEET No. C-31 OF 111 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	49	111



CONSTRUCTION NOTES

- 2 Install New PTZ CCTV Camera on Existing Tunnel Gantry Per Sheet C-54
- 7 Install New Layer 2 Ethernet Switch
- 11 Install New Fiber Optic Patch Panel - 12 Port
- 12 Install New Fiber Optic Patch Panel - 24 Port
- 14 Install Fiber Optic Jumper Cables

CABLE NOTES

- 1 Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- 2 Install New 72-Strand SMFO Cable in New Fabric Innerduct
- 3 Install New 12-Strand SMFO Cable in New Fabric Innerduct
- 4 Install New CAT6E Cable in New Fabric Innerduct

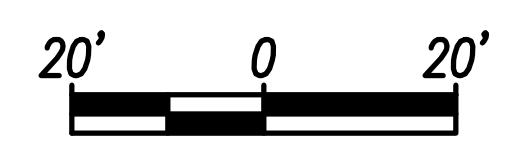
CONDUIT NOTES

- 1 Install New Cable and Innerduct In Existing Conduit

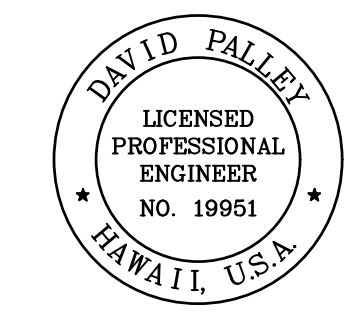
NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.

H-3 FREEWAY - STA 682+00 TO STA 688+00
 (BASE BID)
 Scale: 1" = 20'



DATE	_____
DESIGNED BY	_____
CHECKED BY	_____
NO.	_____



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 Signature: _____
 Date: 4/20/2028
 Expiration Date of License

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
 STA 682+00 TO STA 688+00

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. C-32 OF 111 SHEETS

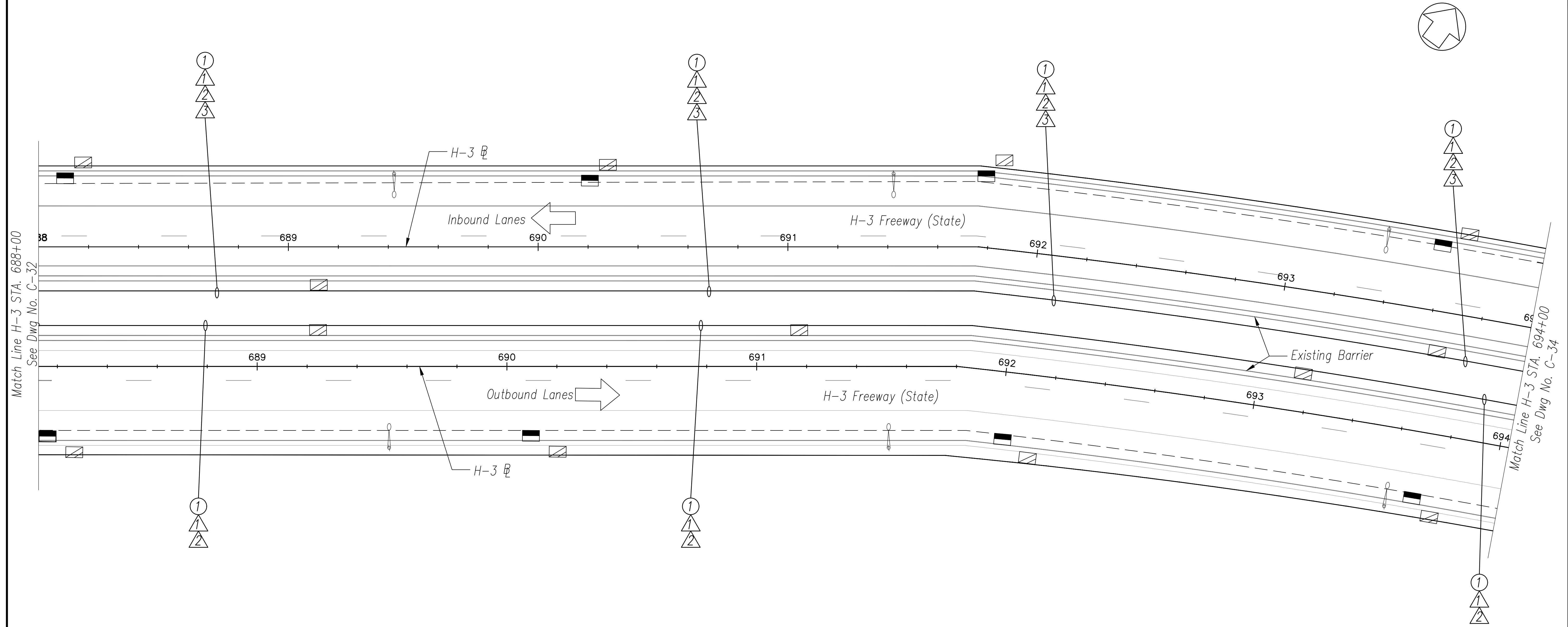
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	50	111

CABLE NOTES

- ① Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- ② Install New 72-Strand SMFO Cable in New Fabric Innerduct
- ③ Install New 12-Strand SMFO Cable in New Fabric Innerduct

CONDUIT NOTES

- ① Install New Cable and Innerduct In Existing Conduit



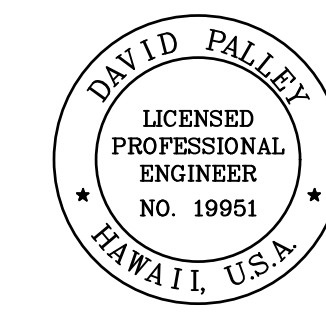
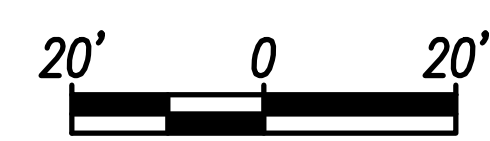
ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.

H-3 FREEWAY - STA 688+00 TO STA 694+00

(BASE BID)
Scale: 1" = 20'



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 EXPIRATION DATE OF LICENSE: 4/20/2028

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
 STA 688+00 TO STA 694+00

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	51	111

CONSTRUCTION NOTES

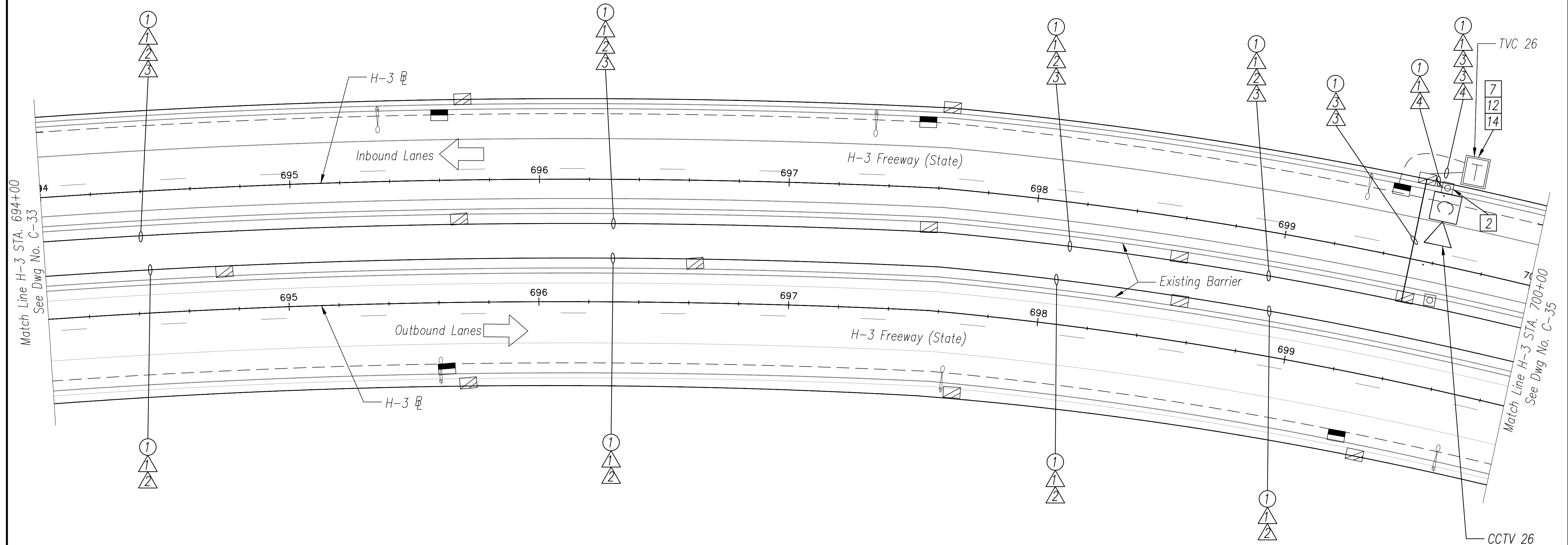
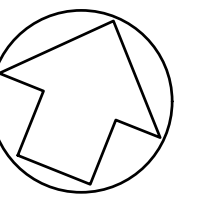
- ② Install New PTZ CCTV Camera on Existing Tunnel Gantry Per Sheet C-54
- ⑦ Install New Layer 2 Ethernet Switch
- ⑫ Install New Fiber Optic Patch Panel – 24 Port
- ⑭ Install Fiber Optic Jumper Cables

CABLE NOTES

- ① Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- ② Install New 72-Strand SMFO Cable in New Fabric Innerduct
- ③ Install New 12-Strand SMFO Cable in New Fabric Innerduct
- ④ Install New CAT6E Cable in New Fabric Innerduct

CONDUIT NOTES

- ① Install New Cable and Innerduct In Existing Conduit

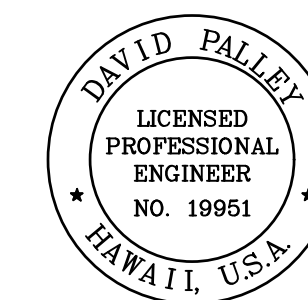
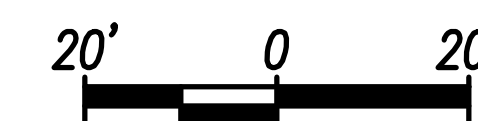


ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.

H-3 FREEWAY – STA 694+00 TO STA 700+00
 (BASE BID)
 Scale: 1" = 20'



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STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
 STA 694+00 TO STA 700+00

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. C-34 OF 111 SHEETS

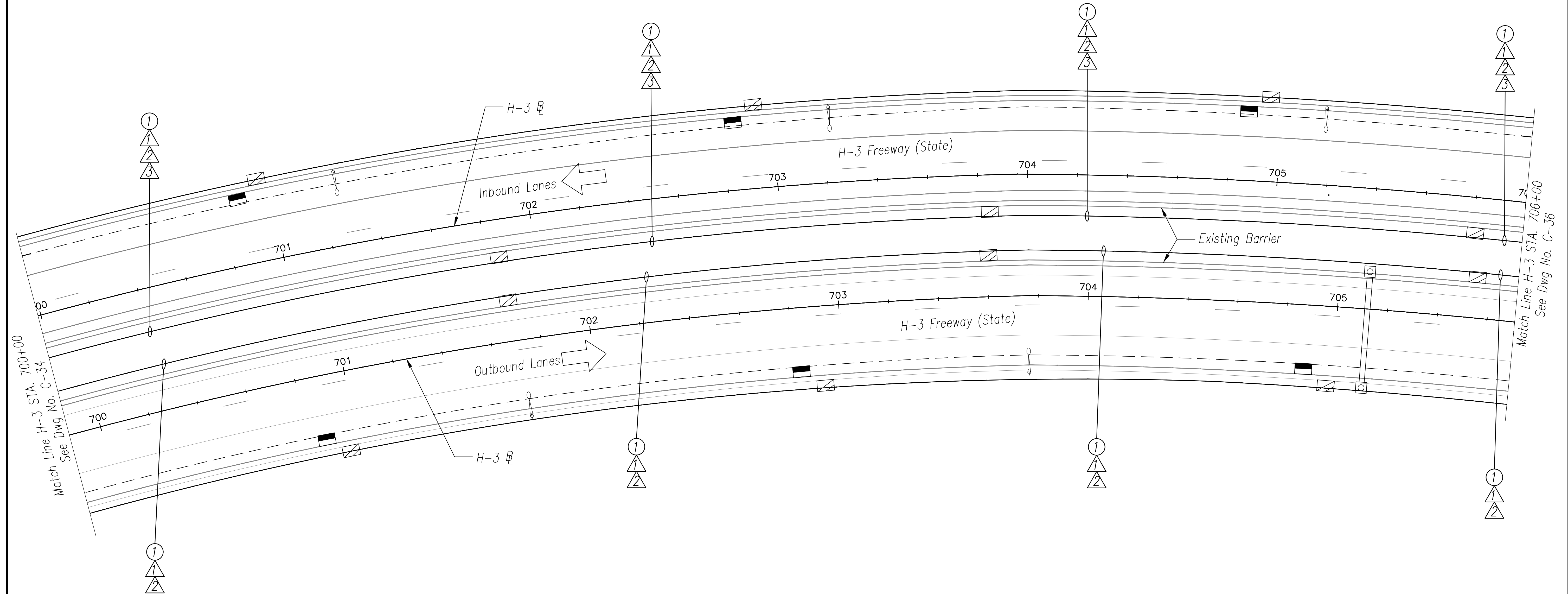
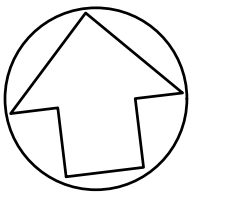
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	52	111

CABLE NOTES

- ① Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- ② Install New 72-Strand SMFO Cable in New Fabric Innerduct
- ③ Install New 12-Strand SMFO Cable in New Fabric Innerduct

CONDUIT NOTES

- ① Install New Cable and Innerduct In Existing Conduit



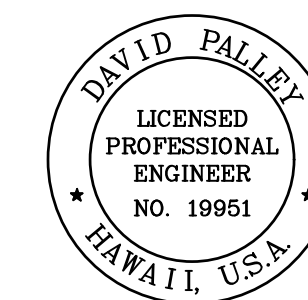
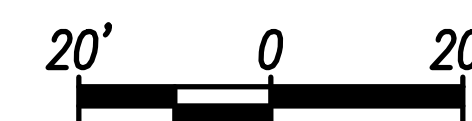
ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.

H-3 FREEWAY - STA 700+00 TO STA 706+00

(BASE BID)
Scale: 1" = 20'



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David Palley
SIGNATURE

4/20/2028
EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
STA 700+00 TO STA 706+00

Freeway Management System, Phase 4
Federal Aid Project No. NH-0300(176)R

Scale: As Indicated Date: April 2026

SHEET No. C-35 OF 111 SHEETS

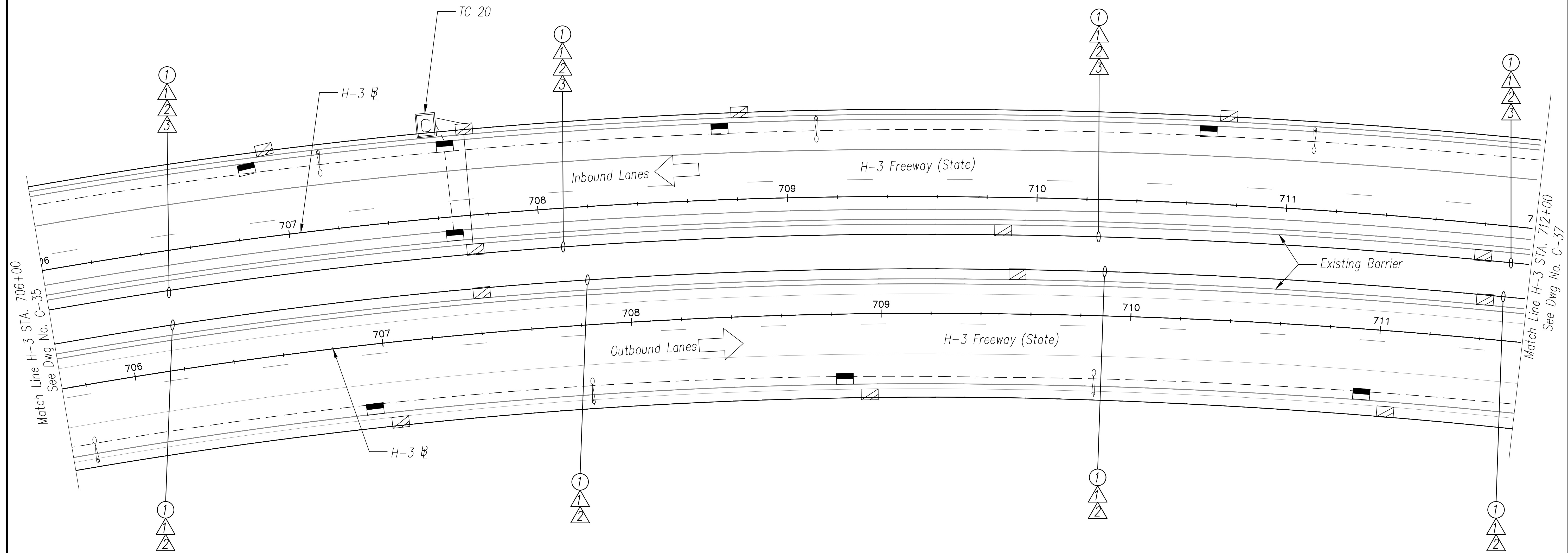
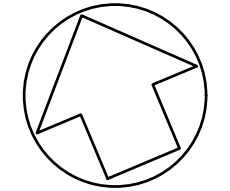
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	53	111

CABLE NOTES

- ① Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- ② Install New 72-Strand SMFO Cable in New Fabric Innerduct
- ③ Install New 12-Strand SMFO Cable in New Fabric Innerduct

CONDUIT NOTES

- ① Install New Cable and Innerduct In Existing Conduit

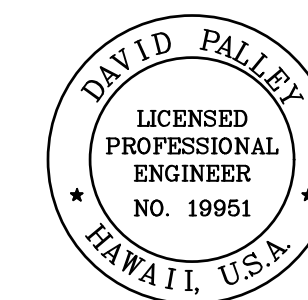
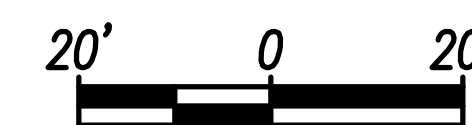


ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

NOTES:

- Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.

H-3 FREEWAY – STA 706+00 TO STA 712+00
 (BASE BID)
 Scale: 1" = 20'



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STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
 STA 706+00 TO STA 712+00

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. C-36 OF 111 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	54	111

CABLE NOTES

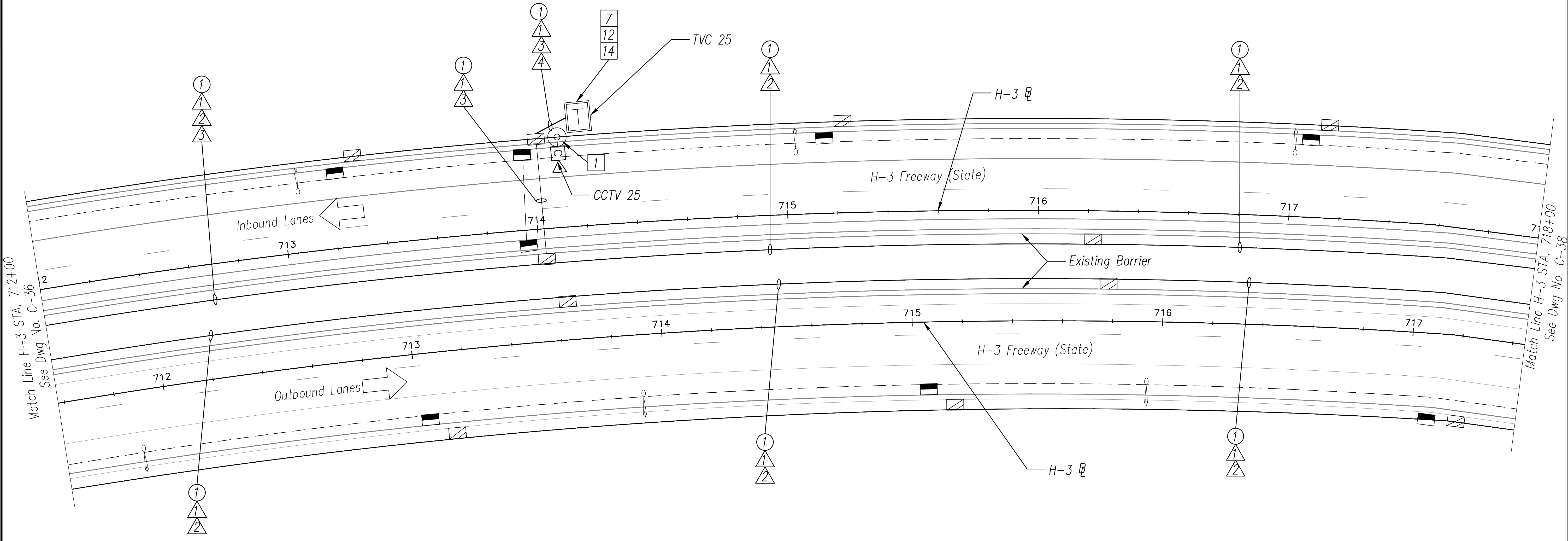
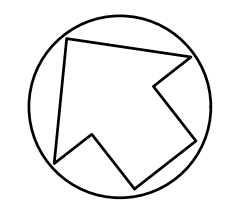
- ① Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- ② Install New 72-Strand SMFO Cable in New Fabric Innerduct
- ③ Install New 12-Strand SMFO Cable in New Fabric Innerduct
- ④ Install New CAT6E (or Equivalent) Cable in New Fabric Innerduct

CONSTRUCTION NOTES

- 1 Install New PTZ CCTV Camera on Existing Camera Pole Per Sheet C-53
- 7 Install New Layer 2 Ethernet Switch
- 12 Install New Fiber Optic Patch Panel - 24 Port
- 14 Install Fiber Optic Jumper Cables

CONDUIT NOTES

- ① Install New Cable and Innerduct In Existing Conduit

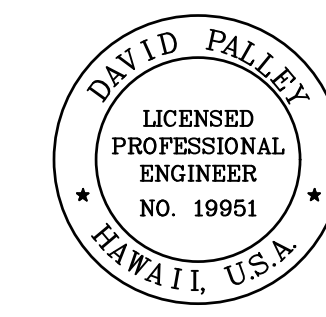
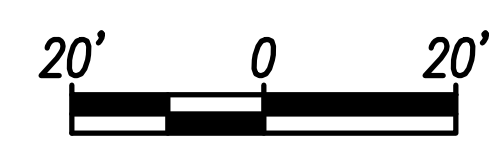


ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.

H-3 FREEWAY - STA 712+00 TO STA 718+00
 (BASE BID)
 Scale: 1" = 20'



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 EXPIRATION DATE OF LICENSE: 4/20/2028

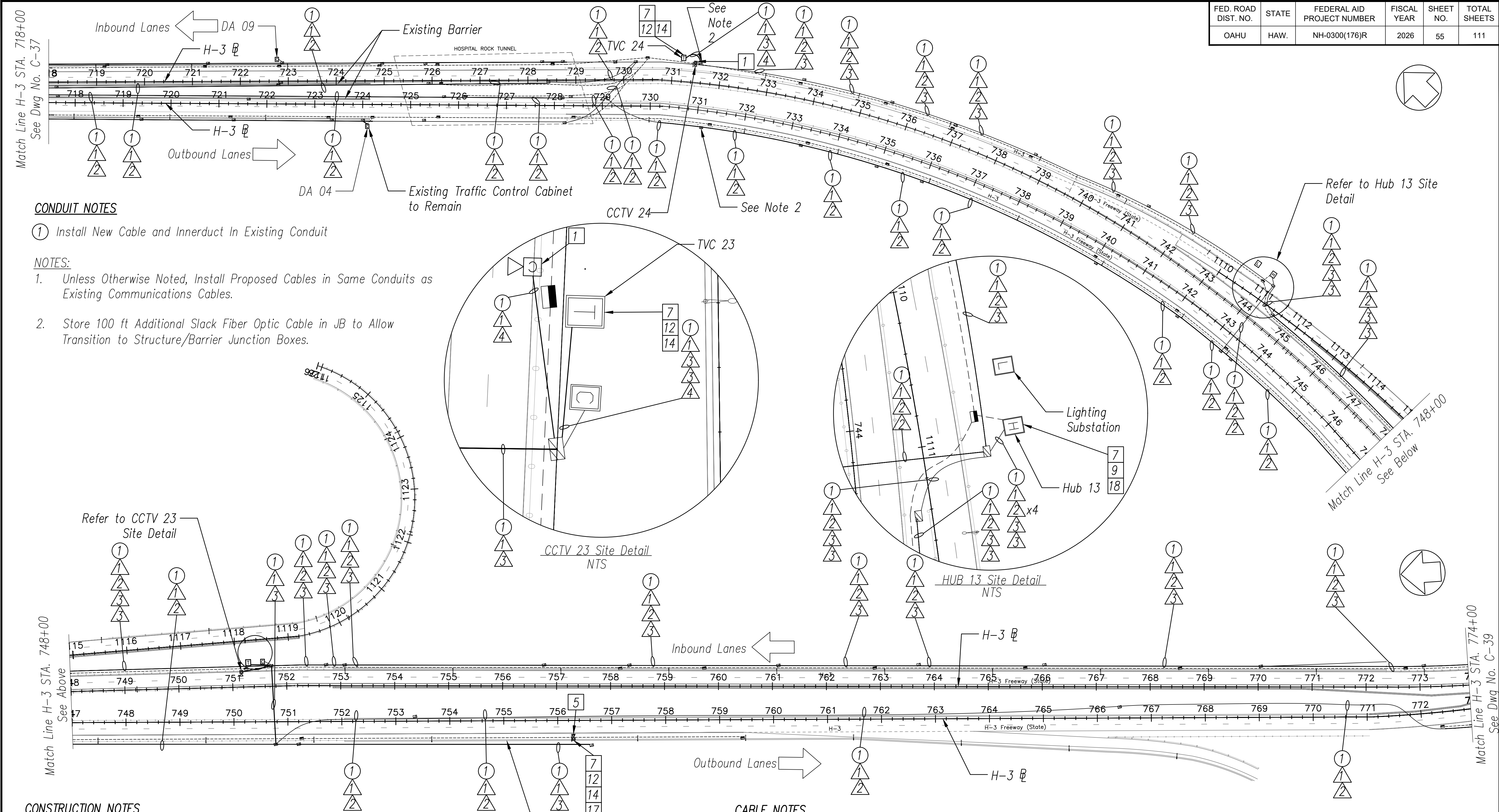
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
 STA 712+00 TO STA 718+00

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. C-37 OF 111 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	55	111



CONDUIT NOTES

- ① Install New Cable and Innerduct In Existing Conduit

NOTES:

1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.
2. Store 100 ft Additional Slack Fiber Optic Cable in JB to Allow Transition to Structure/Barrier Junction Boxes.

CONSTRUCTION NOTES

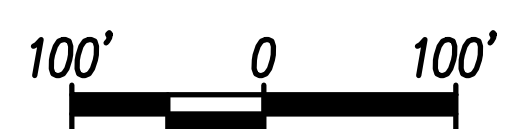
- 1 Install New PTZ CCTV Camera on Existing Camera Pole Per Sheet C-53
- 5 Install New PTZ CCTV Camera on Existing Light Pole Per Sheet C-53
- 7 Install New Layer 2 Ethernet Switch
- 9 Reconnect and Recalibrate Existing Wireless Network Link
- 12 Install New Fiber Optic Patch Panel - 24 Port
- 14 Install Fiber Optic Jumper Cables
- 17 Install New NEMA 3R Enclosure
- 18 Install New NEMA 340 Hub Cabinet Enclosure

CABLE NOTES

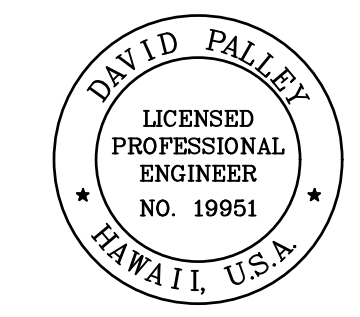
- ① Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- ② Install New 72-Strand SMFO Cable in New Fabric Innerduct
- ③ Install New 12-Strand SMFO Cable in New Fabric Innerduct
- ④ Install New CAT6E or Equivalent Cable in New Fabric Innerduct

H-3 FREEWAY - STA 718+00 TO STA 775+00

(BASE BID)
Scale: 1" = 100'



DATE	_____
DESIGNED BY	_____
CHECKED BY	_____
DATE	_____
DESIGNED BY	_____
CHECKED BY	_____
DATE	_____
DESIGNED BY	_____
CHECKED BY	_____



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
 Signature: _____
 DATE: 4/20/2028
 EXPIRATION DATE OF LICENSE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
STA 718+00 TO STA 775+00

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. C-38 OF 111 SHEETS

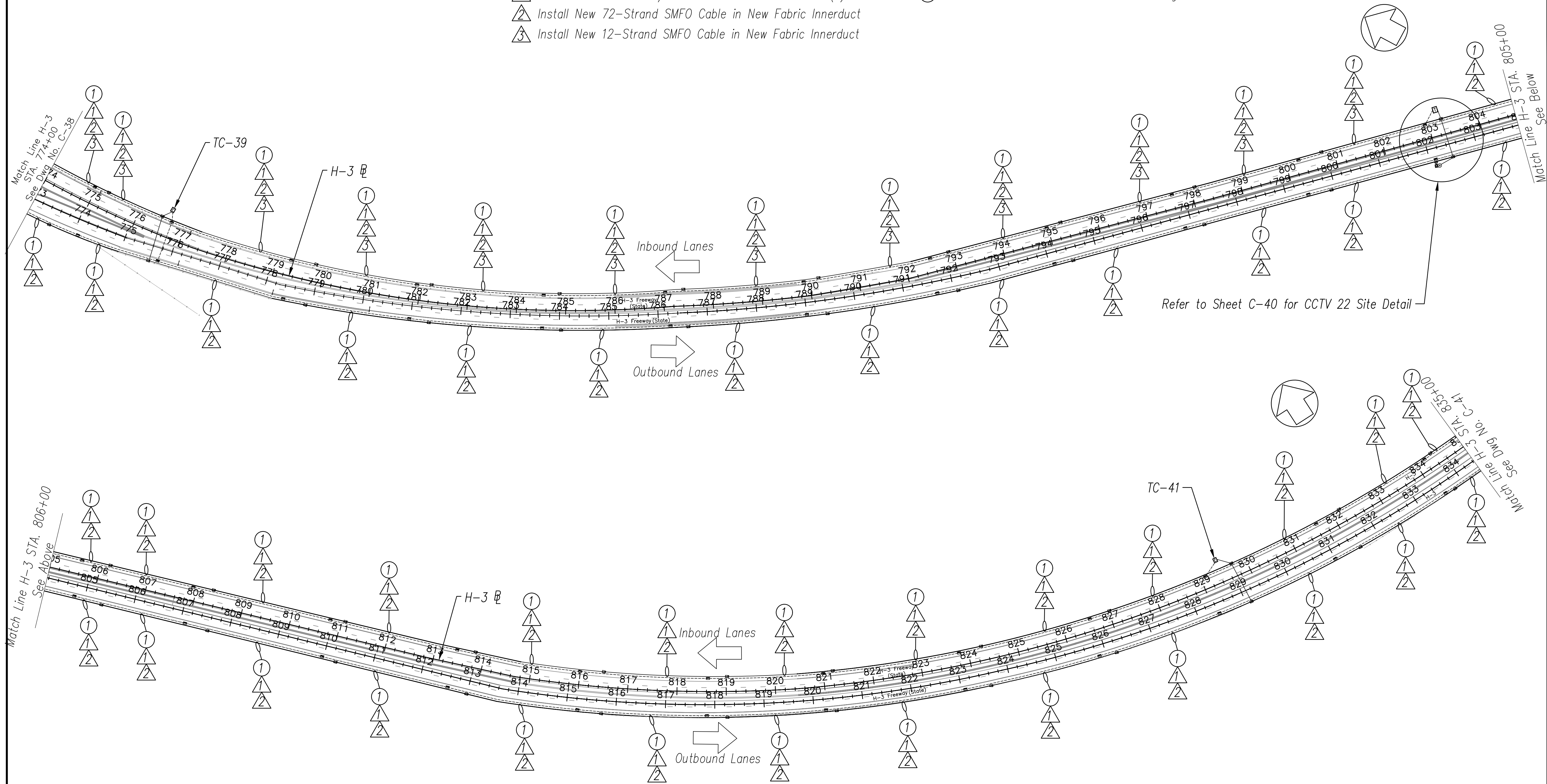
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	56	111

CABLE NOTES

- ① Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- ② Install New 72-Strand SMFO Cable in New Fabric Innerduct
- ③ Install New 12-Strand SMFO Cable in New Fabric Innerduct

CONDUIT NOTES

- ① Install New Cable and Innerduct In Existing Conduit



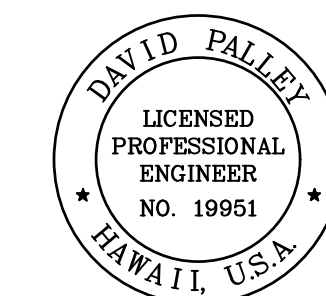
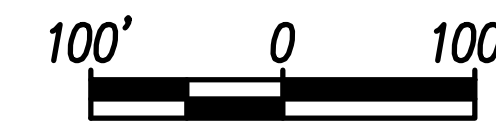
DATE	_____
DESIGNED BY	_____
DRAWN BY	_____
CHECKED BY	_____
DATE	_____
DESIGNED BY	_____
DRAWN BY	_____
CHECKED BY	_____

NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.

H-3 FREEWAY – STA 775+00 TO STA 837+00

(BASE BID)
Scale: 1" = 100'



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SIGNATURE: *David Palley*
EXPIRATION DATE OF LICENSE: 4/20/2028

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
STA 775+00 TO STA 837+00

Freeway Management System, Phase 4
Federal Aid Project No. NH-0300(176)R
Scale: As Indicated Date: April 2026

SHEET No. C-39 OF 111 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	57	111

CONSTRUCTION NOTES

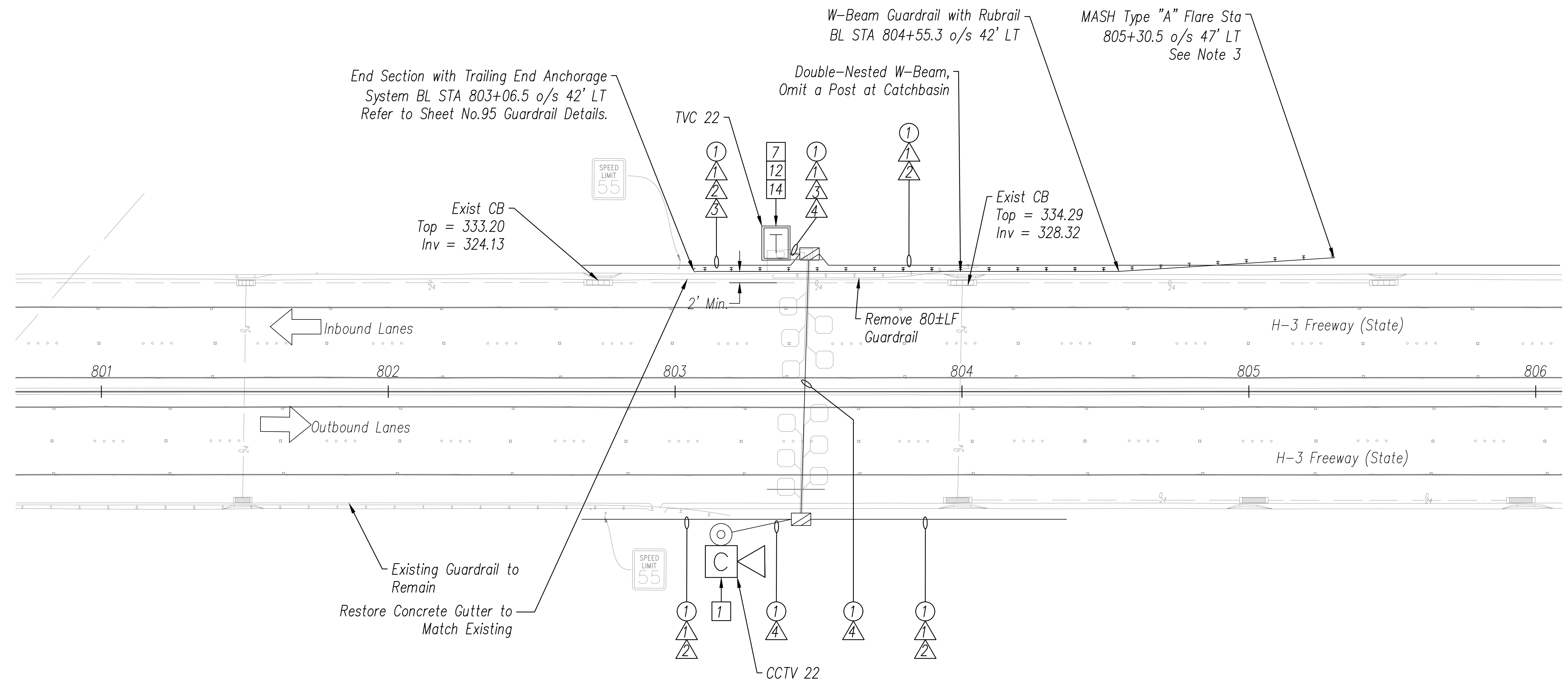
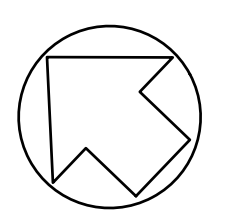
- 1 Install New CCTV Camera on Existing Camera Pole Per Sheet C-53
- 7 Install New Layer 2 Ethernet Switch
- 12 Install New Fiber Optic Patch Panel – 24 Port
- 14 Install Fiber Optic Jumper Cables

CABLE NOTES

- 1 Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- 2 Install New 72-Strand SMFO Cable in New Fabric Innerduct
- 3 Install New 12-Strand SMFO Cable in New Fabric Innerduct
- 4 Install New CAT6E Cable in New Fabric Innerduct

CONDUIT NOTES

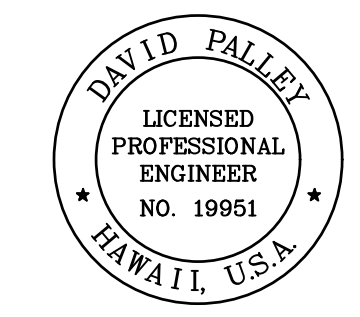
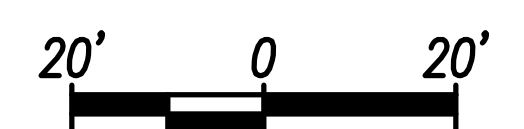
- 1 Install New Cable and Innerduct In Existing Conduit



NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.
- 2. Refer to Sheet C-39 for Context of Site Location. Match Lines Omitted As Project Wide Alignment Is For Reference Only and Has Not Been Surveyed. Alignment in This Sheet Matches Sta 803+00 to Surveyed Mag Nail at N 78,561.99 ; E 1,705,400.91.
- 3. Guardrail Details Refer to Sheets No.85 to 91 Guardrail Details.

H-3 FREEWAY – CCTV 22 SITE DETAIL
Scale: 1" = 20'



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 Signature: *David Palley*
 EXPIRATION DATE OF LICENSE: 4/20/2028

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

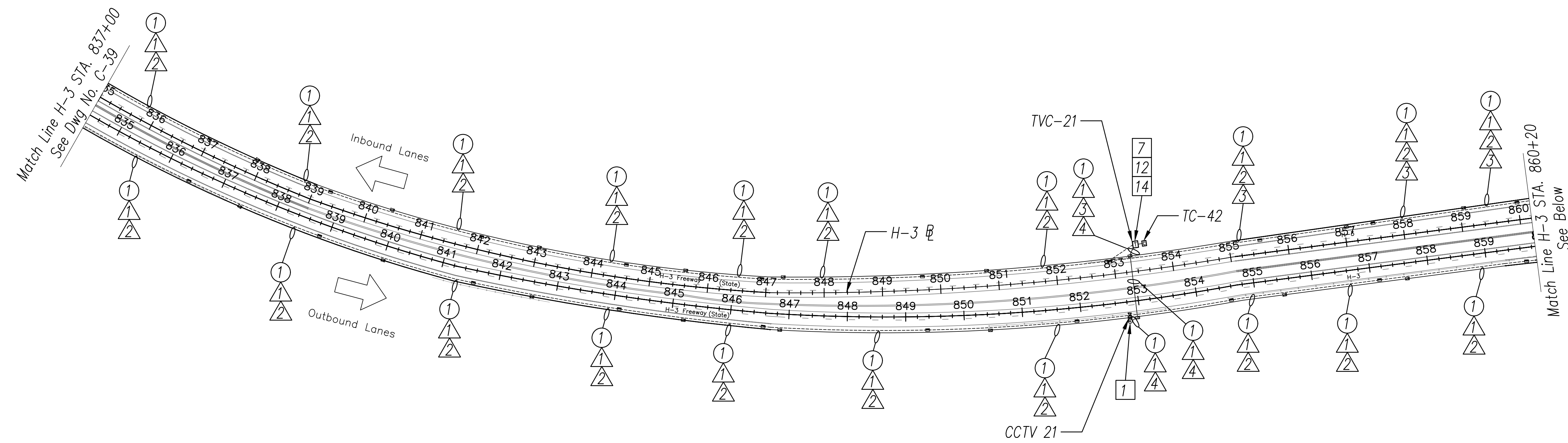
ITS PLAN
H-3 FREEWAY
CCTV 22 – SITE DETAIL

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. C-40 OF 111 SHEETS

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	58	111



CONSTRUCTION NOTES

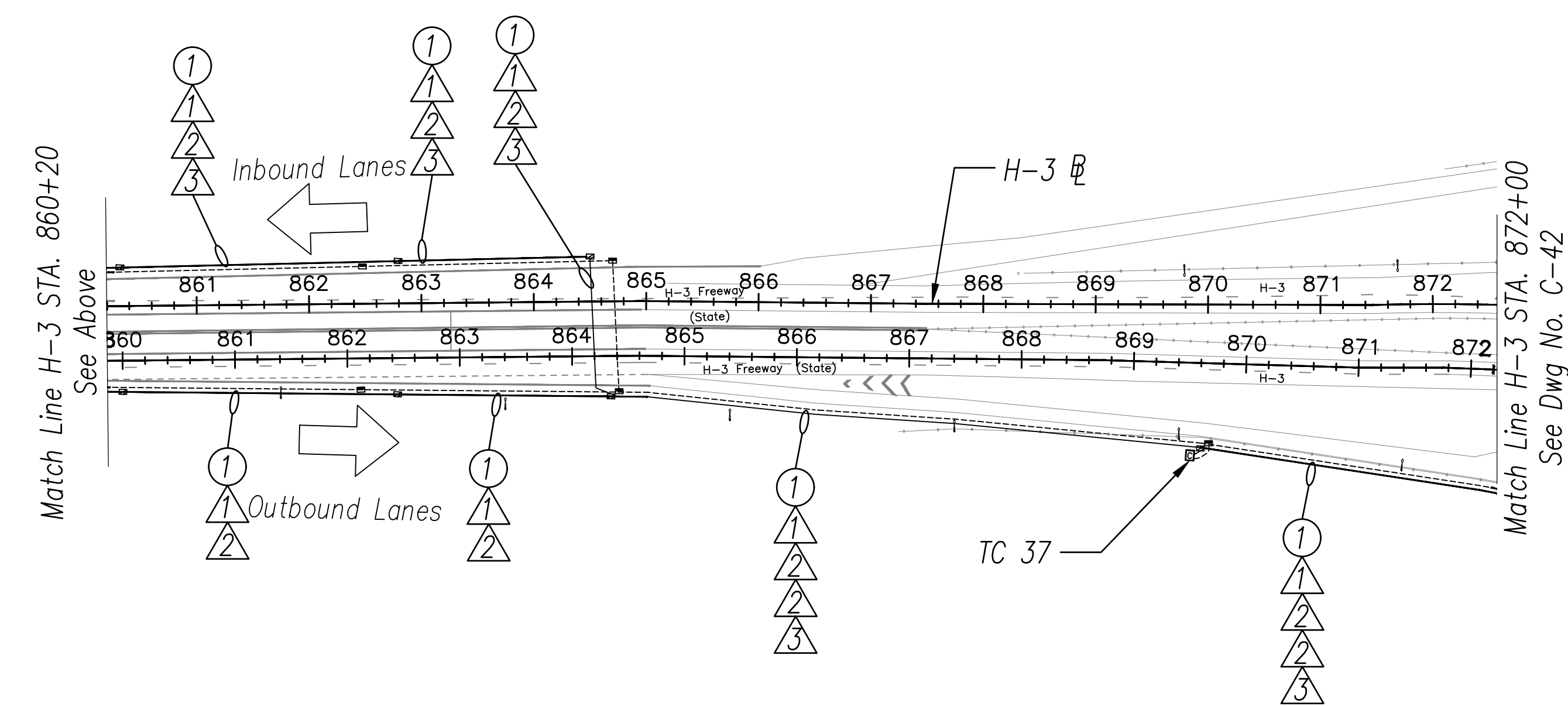
- 1 Install New PTZ CCTV Camera on Existing Camera Pole Per Sheet C-53
- 7 Install New Layer 2 Ethernet Switch
- 12 Install New Fiber Optic Patch Panel – 24 Port
- 14 Install Fiber Optic Jumper Cables

CABLE NOTES

- 1 Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- 2 Install New 72-Strand SMFO Cable in New Fabric Innerduct
- 3 Install New 12-Strand SMFO Cable in New Fabric Innerduct
- 4 Install New CAT6E Cable in New Fabric Innerduct

CONDUIT NOTES

- 1 Install New Cable and Innerduct In Existing Conduit

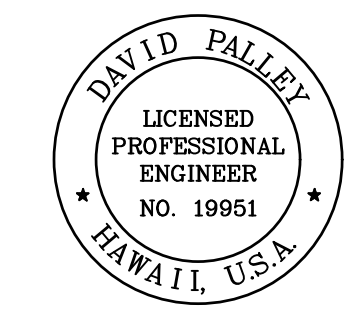
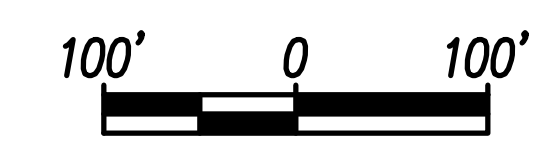


DATE	_____
SURVEY PLOTTED BY	_____
ORIGINAL PLAN	_____
DESIGNED BY	_____
TRACED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
NOTE BOOK	_____
No.	_____

NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.

H-3 FREEWAY – STA 837+00 TO STA 872+00
 (BASE BID)
 Scale: 1" = 100'



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
 Signature: _____
 EXPIRATION DATE OF LICENSE: 4/20/2028

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
STA 837+00 TO STA 872+00

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. C-41 OF 111 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	59	111

CONSTRUCTION NOTES

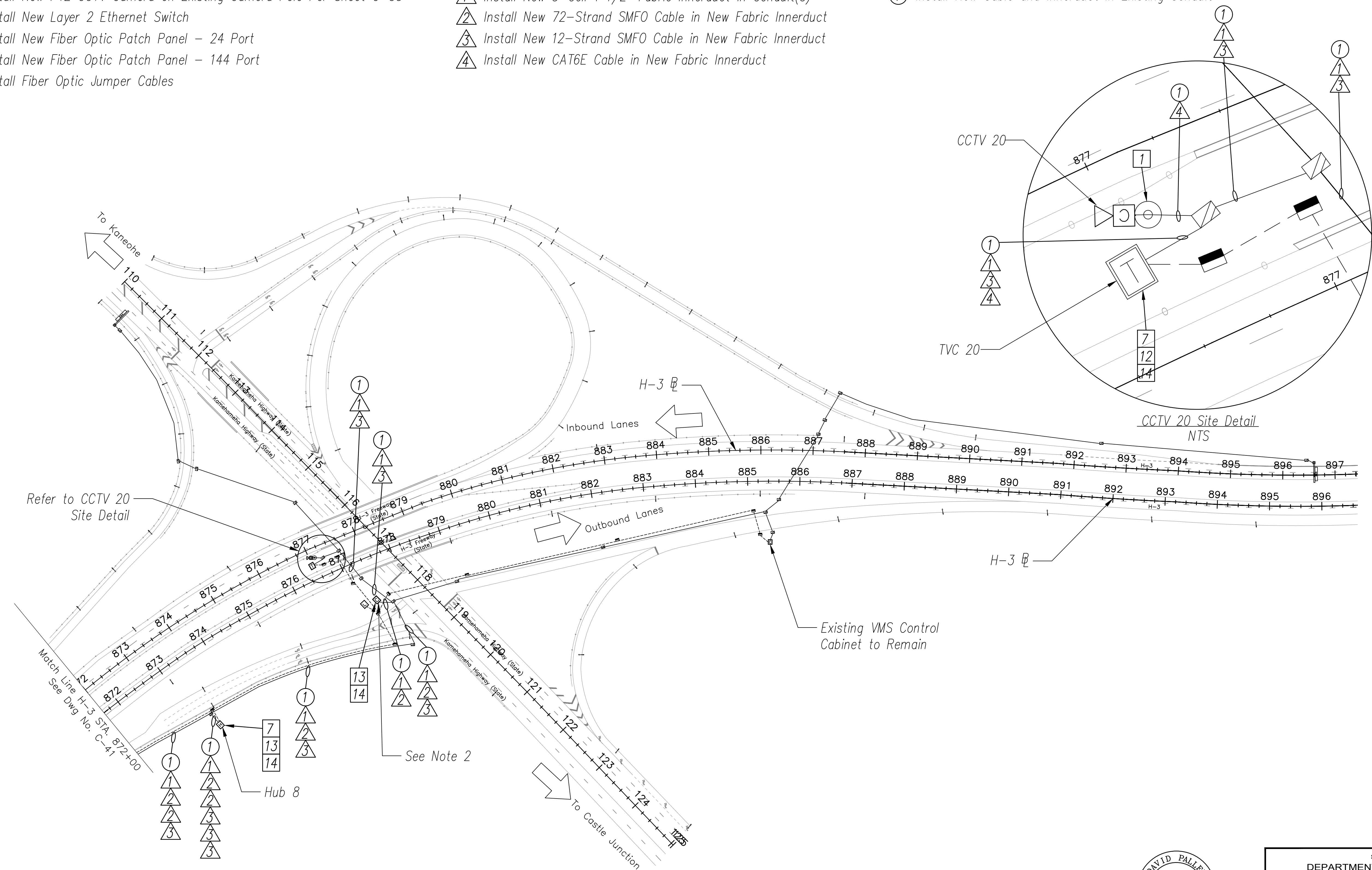
- 1 Install New PTZ CCTV Camera on Existing Camera Pole Per Sheet C-53
- 7 Install New Layer 2 Ethernet Switch
- 12 Install New Fiber Optic Patch Panel – 24 Port
- 13 Install New Fiber Optic Patch Panel – 144 Port
- 14 Install Fiber Optic Jumper Cables

CABLE NOTES

- 1 Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- 2 Install New 72-Strand SMFO Cable in New Fabric Innerduct
- 3 Install New 12-Strand SMFO Cable in New Fabric Innerduct
- 4 Install New CAT6E Cable in New Fabric Innerduct

CONDUIT NOTES

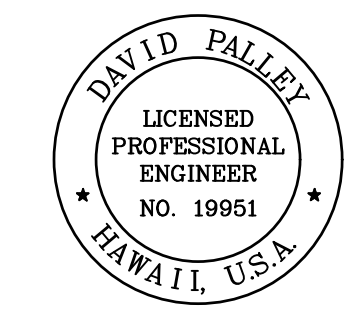
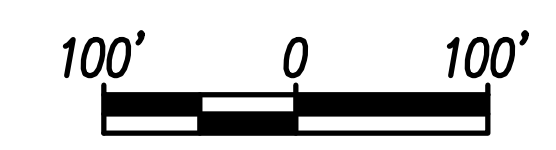
- 1 Install New Cable and Innerduct In Existing Conduit



NOTES:

- 1. Unless Otherwise Noted, Install Proposed Cables in Same Conduits as Existing Communications Cables.
- 2. Terminate Proposed Fiber Trunk in Existing City of Honolulu Cabinet to Complete Connection Along Kamehameha Hwy to Pali Hwy.

H-3 FREEWAY – STA 872+00 TO STA 897+00
 (BASE BID)
 Scale: 1" = 100'



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
 Signature: *David Palley*
 Date: 4/20/2028
 Expiration Date of License: 4/20/2028

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS PLAN
H-3 FREEWAY
 STA 872+00 TO STA 897+00

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. C-42 OF 111 SHEETS

ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
QUANTITIES BY	
CHECKED BY	
No.	

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	60	111

CONSTRUCTION NOTES

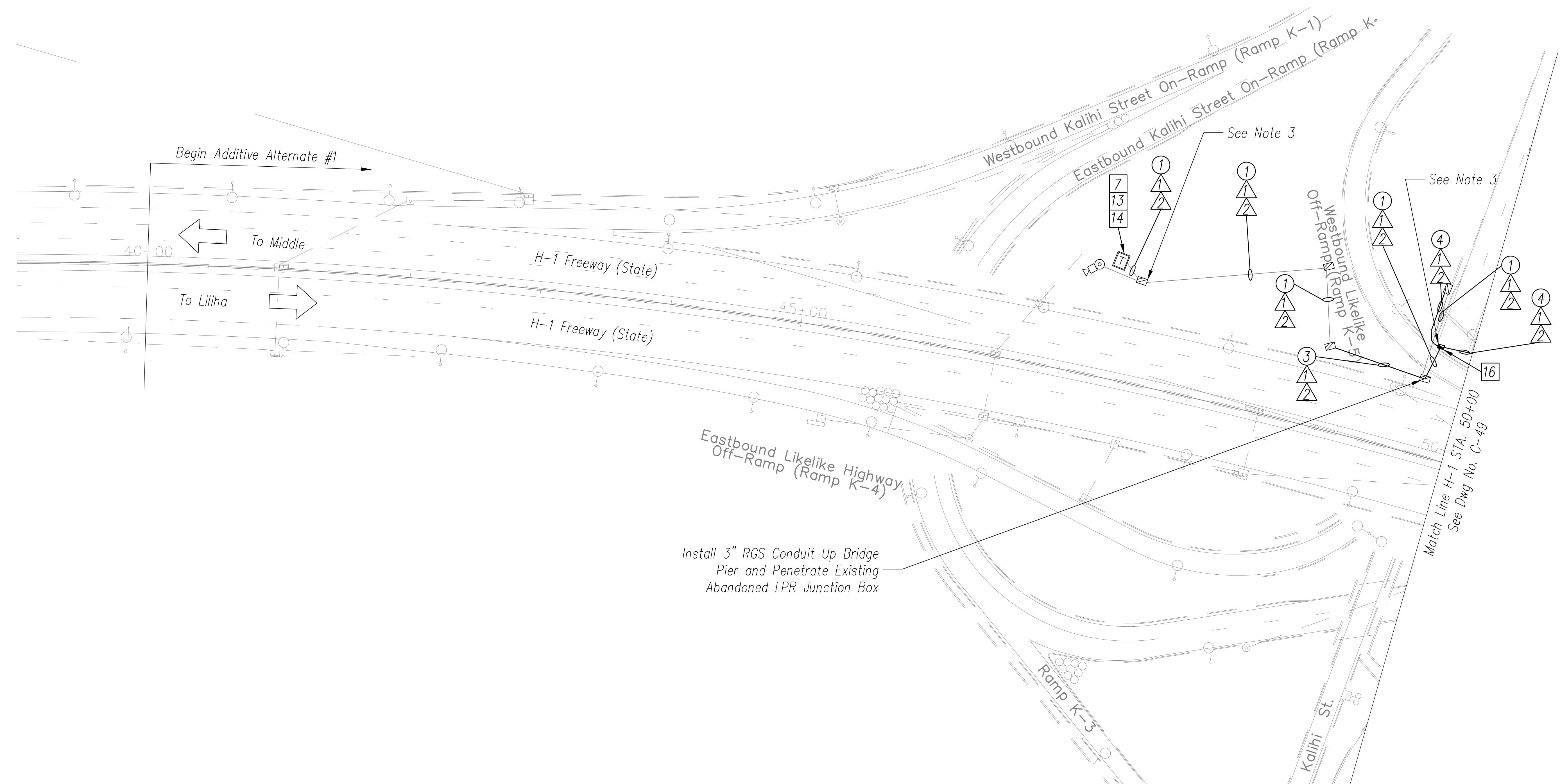
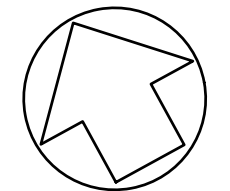
- 7 Install New Layer 2 Ethernet Switch
- 13 Install New Fiber Optic Patch Panel – 144 Port
- 14 Install Fiber Optic Jumper Cables
- 16 Install New Stainless Steel Surface Mounted Pull Box

CABLE NOTES

- ▲ Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- ▲ Install New 72-Strand SMFO Cable in New Fabric Innerduct

CONDUIT NOTES

- ① Install New Cable and Innerduct In Existing Conduit
- ③ Install 3" Conduit In Earth
- ④ Install 3" RGS Structure-Mounted Conduit

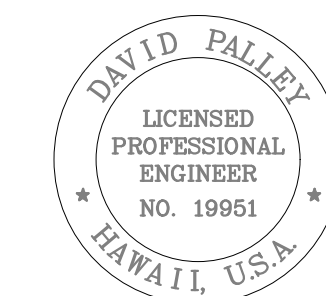
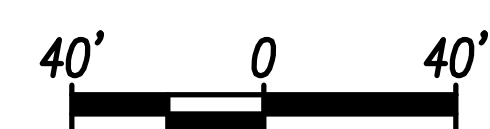


ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

NOTES:

1. Refer to Sheet G-08 for Typical Construction Notes.
2. Topographical Information on This Sheet Is Based On Previously Surveyed Mapping. This Mapping Was Not Updated and May Not Represent Perfectly Existing Field Conditions. All Work Shall Be Completed Within The Existing Legal Right of Way.
3. Penetrate Existing Junction Box with Proposed Conduits to Complete Conduit Connection to Existing CCTV Camera Cabinet.

H-1 – STA 39+00 TO STA 50+00
Scale: 1" = 40'



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 Signature: *David Palley*
 EXPIRATION DATE OF LICENSE: 4/20/2028

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS PLAN
H-1 FREEWAY
STA 39+00 TO STA 50+00

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. C-43 OF 111 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	61	111

CONSTRUCTION NOTES

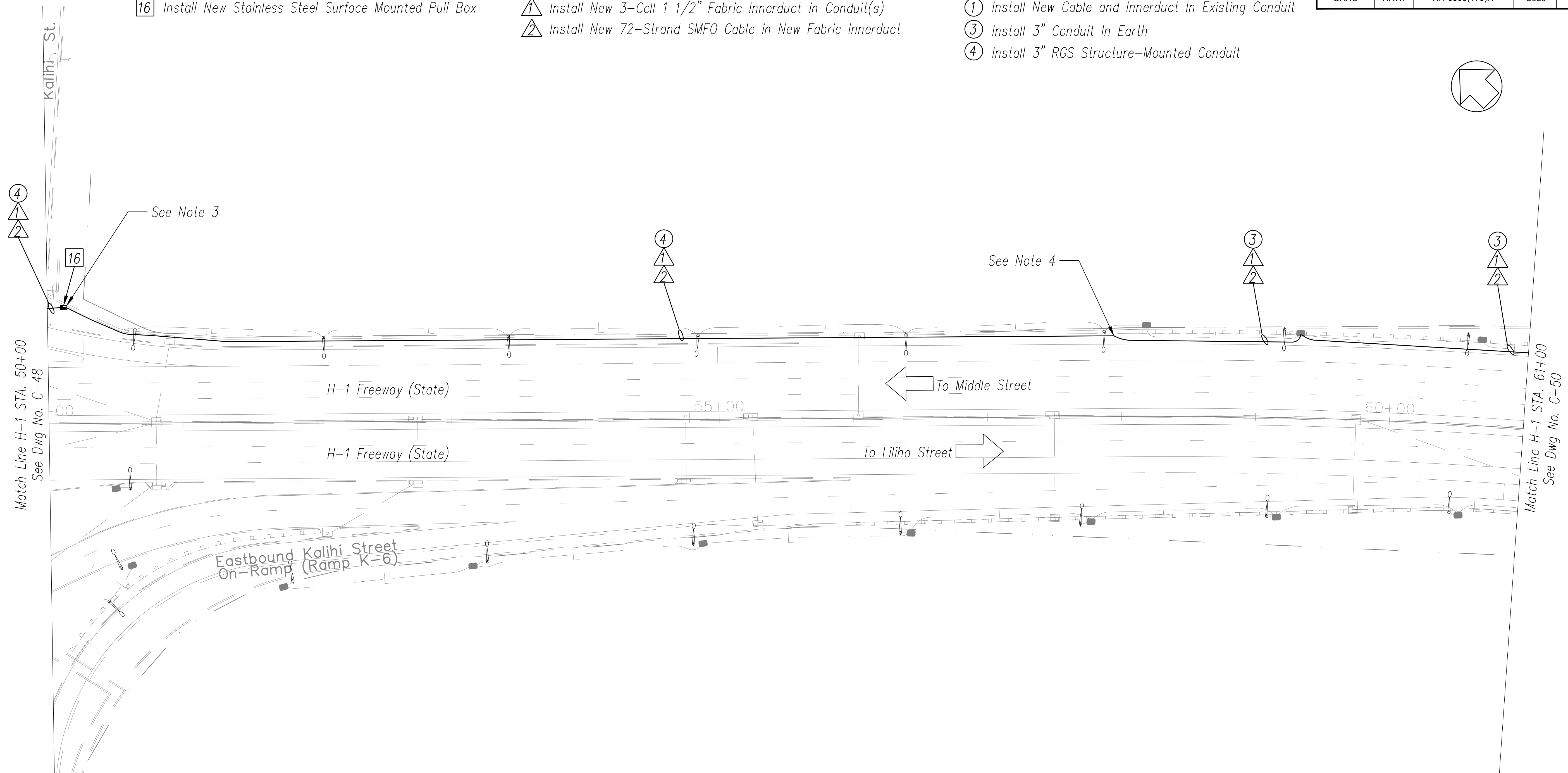
16 Install New Stainless Steel Surface Mounted Pull Box

CABLE NOTES

- 1 Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- 2 Install New 72-Strand SMFO Cable in New Fabric Innerduct

CONDUIT NOTES

- 1 Install New Cable and Innerduct In Existing Conduit
- 3 Install 3" Conduit In Earth
- 4 Install 3" RGS Structure-Mounted Conduit

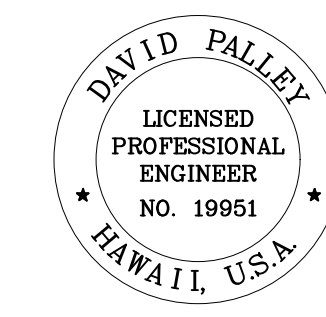
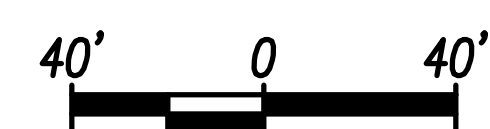


NOTES:

1. Install Proposed Fiber Optic Cable in Existing Spare Communication Ducts Where Existing Conduit Indicated.
2. Topographical Information on This Sheet Is Based On Previously Surveyed Mapping. This Mapping Was Not Updated and May Not Represent Perfectly Existing Field Conditions. All Work Shall Be Completed Within The Existing Legal Right of Way.
3. Mount RGS Conduit to Top Exterior of Existing Retaining Wall Alongside Existing Right-of-Way Fence.
4. Transition RGS Structure Mounted Conduits to Earth and Penetrate Existing Junction Box.

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

H-1 FREEWAY - STA 50+00 TO STA 61+00
Scale: 1" = 40'



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 EXPIRATION DATE OF LICENSE: 4/20/2028

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS PLAN
H-1 FREEWAY
STA 50+00 TO STA 61+00

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. C-44 OF 111 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	62	111

CONSTRUCTION NOTES

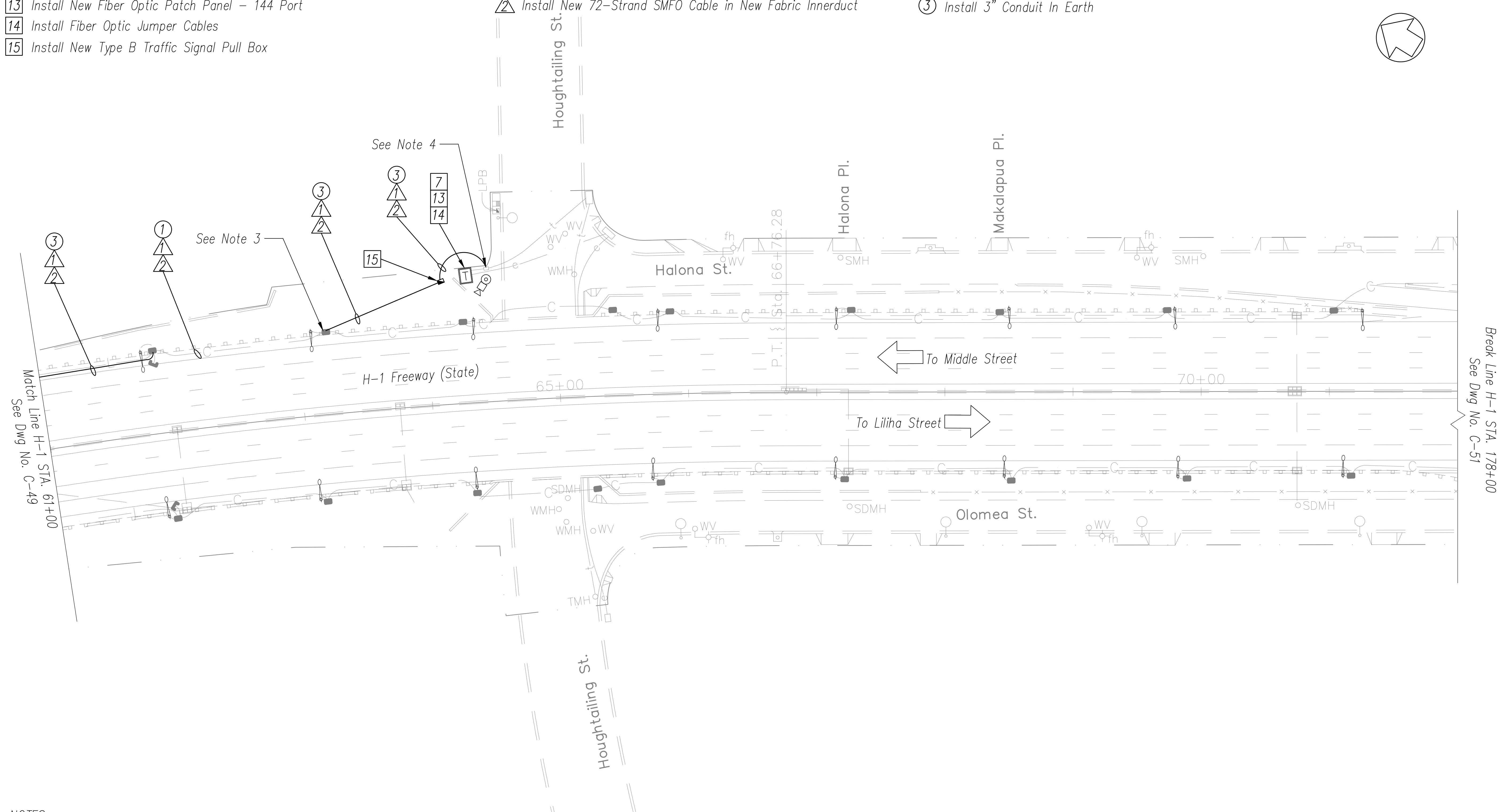
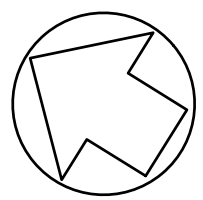
- 7 Install New Layer 2 Ethernet Switch
- 13 Install New Fiber Optic Patch Panel – 144 Port
- 14 Install Fiber Optic Jumper Cables
- 15 Install New Type B Traffic Signal Pull Box

CABLE NOTES

- 1 Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- 2 Install New 72-Strand SMFO Cable in New Fabric Innerduct

CONDUIT NOTES

- 1 Install New Cable and Innerduct In Existing Conduit
- 3 Install 3" Conduit In Earth



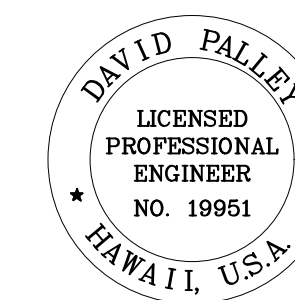
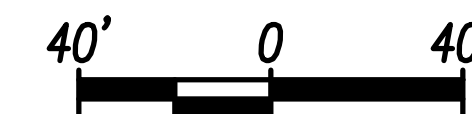
NOTES:

1. Install Proposed Fiber Optic Cable in Existing Spare Communication Ducts.
2. Topographical Information on This Sheet Is Based On Previously Surveyed Mapping. This Mapping Was Not Updated and May Not Represent Perfectly Existing Field Conditions. All Work Shall Be Completed Within The Existing Legal Right of Way.
3. Penetrate Existing Lighting Junction Box With Proposed HDPE Conduits.
4. Penetrate Existing Traffic Signal Junction Box with Proposed HDPE Conduits to Complete Conduit Connection to Houghtailing CCTV Cabinet.

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

H-1 FREEWAY – STA 61+00 TO STA 72+00

Scale: 1" = 40'



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David Palley
SIGNATURE

4/20/2028
EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

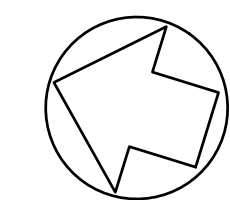
ITS PLAN
H-1 FREEWAY
STA 61+00 TO STA 72+00

Freeway Management System, Phase 4
Federal Aid Project No. NH-0300(176)R

Scale: As Indicated Date: April 2026

SHEET No. C-45 OF 111 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	63	111



CONSTRUCTION NOTES

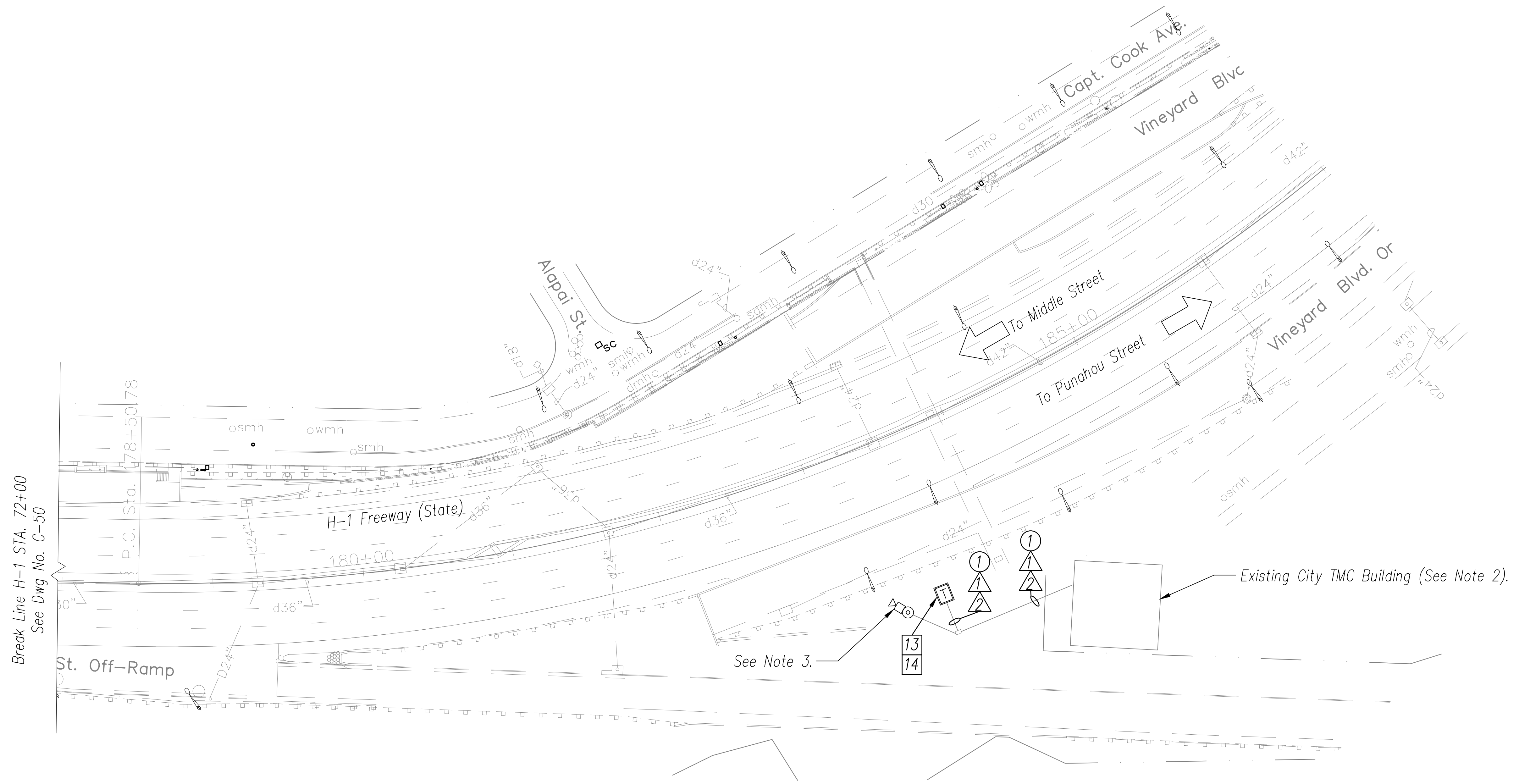
- 13 Install New Fiber Optic Patch Panel – 144 Port
- 14 Install Fiber Optic Jumper Cables

CABLE NOTES

- ▲ Install New 3-Cell 1 1/2" Fabric Innerduct in Conduit(s)
- ▲ Install New 72-Strand SMFO Cable in New Fabric Innerduct

CONDUIT NOTES

- ① Install New Cable and Innerduct In Existing Conduit

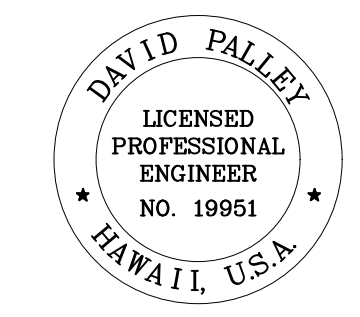
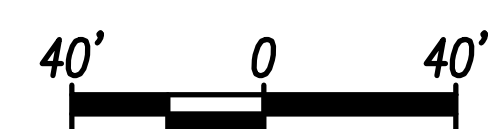


NOTES:

1. Topographical Information on This Sheet Is Based On Previously Surveyed Mapping. This Mapping Was Not Updated and May Not Represent Perfectly Existing Field Conditions. All Work Shall Be Completed Within The Existing Legal Right of Way.
2. Terminate New 72-Strand Fiber Optic Cable in Existing HDOT Fiber Rack. Coordinate Work With CCH DTS and HDOT Representatives.
3. Existing CCTV Camera Pole and Lowering Device with Existing Puowaina CCTV Camera to Remain.

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

H-1 FREEWAY – STA 178+00 TO STA 187+00
Scale: 1" = 40'



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 EXPIRATION DATE OF LICENSE: 4/20/2028

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

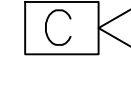
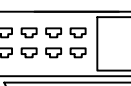
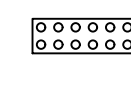
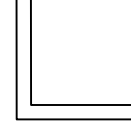
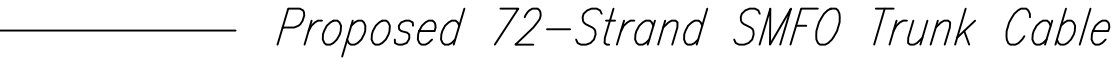


ITS PLAN
H-1 FREEWAY
STA 178+00 TO STA 187+00

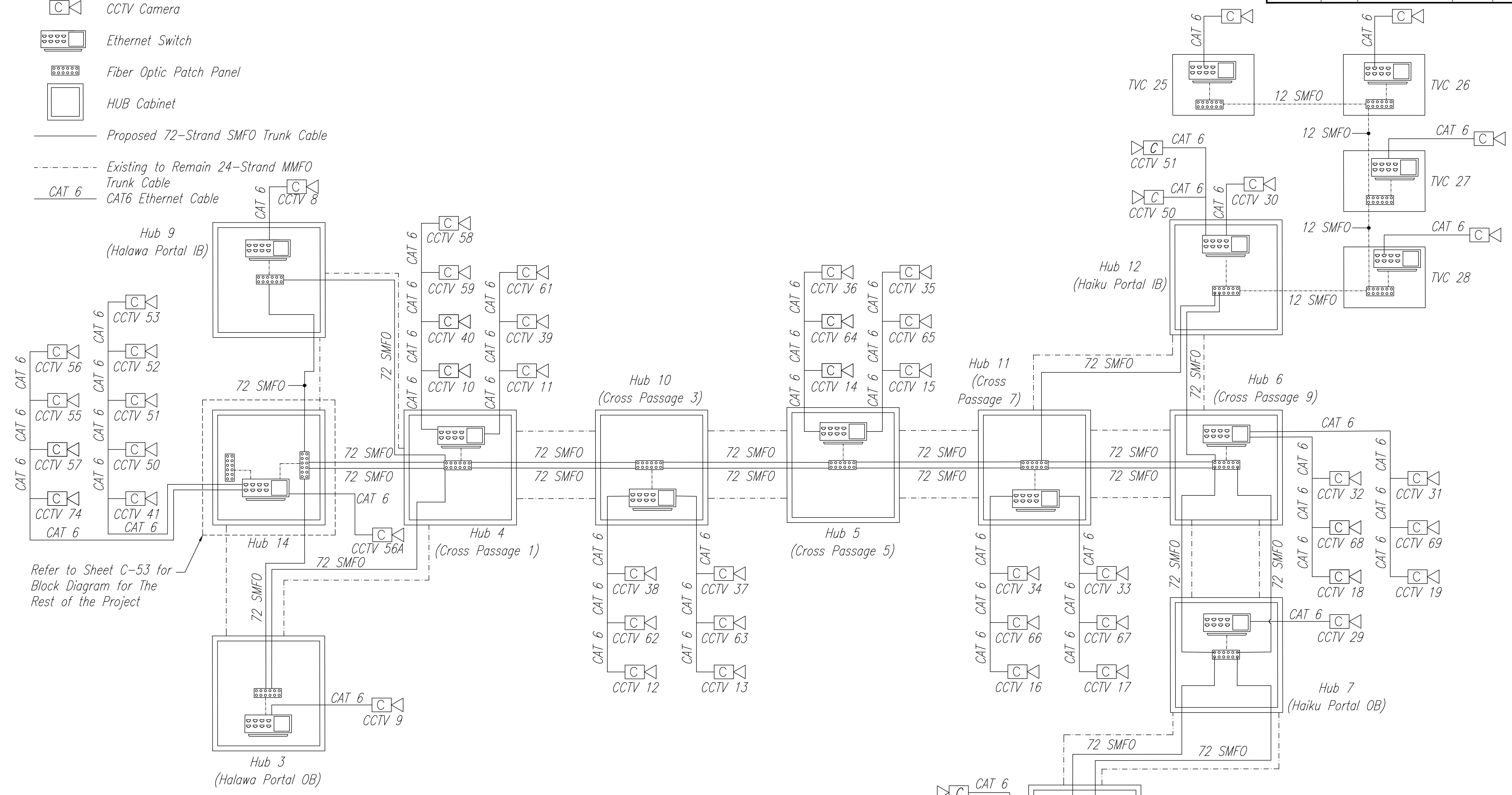
Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. C-46 OF 111 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	64	111

LEGEND

-  CCTV Camera
-  Ethernet Switch
-  Fiber Optic Patch Panel
-  HUB Cabinet
-  Proposed 72-Strand SMFO Trunk Cable
-  Existing to Remain 24-Strand MMFO Trunk Cable
-  CAT 6 Ethernet Cable



Refer to Sheet C-53 for Block Diagram for The Rest of the Project

NOTES:

1. Additional Systems to Remain Have Been Omitted For Clarity. The Scope of This Work Is Limited to Replacing CCTV Cameras, Cables, and Associated Network Equipment Only.
2. Refer to Detail C-49 and C-50 for Cabinet Layout Typical Details.
3. Existing MMFO Terminations Omitted for Clarity. All Existing Tunnel Ring Systems and Cables to Remain Operational Throughout Construction and Following Construction Completion.
4. Maintain Existing CCTV Camera Until Removal is Required for Installation of Proposed CCTV Camera. Limit Decommissioned CCTV Cameras to Two (2) Total CCTV Cameras at Any Given Time. Downtime for an Individual Site Shall Not Exceed 24 Hours.

DATE	_____
DESIGNED BY	_____
CHECKED BY	_____
QUANTITIES BY	_____
TRACED BY	_____
DRAWN BY	_____
PLANNED BY	_____
ORIGINAL PLAN	_____
NO. _____	_____

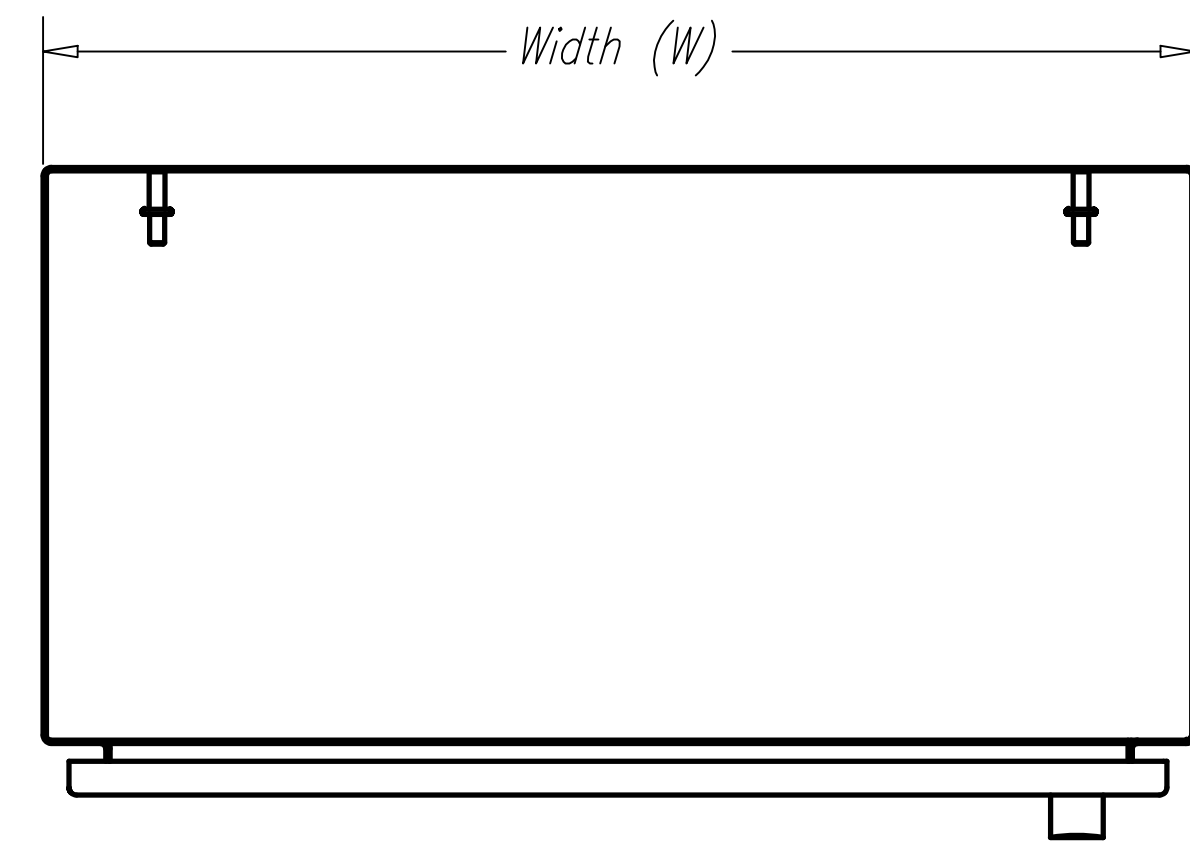


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 Signature: *David Palley*
 EXPIRATION DATE: 4/20/2028
 OF LICENSE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

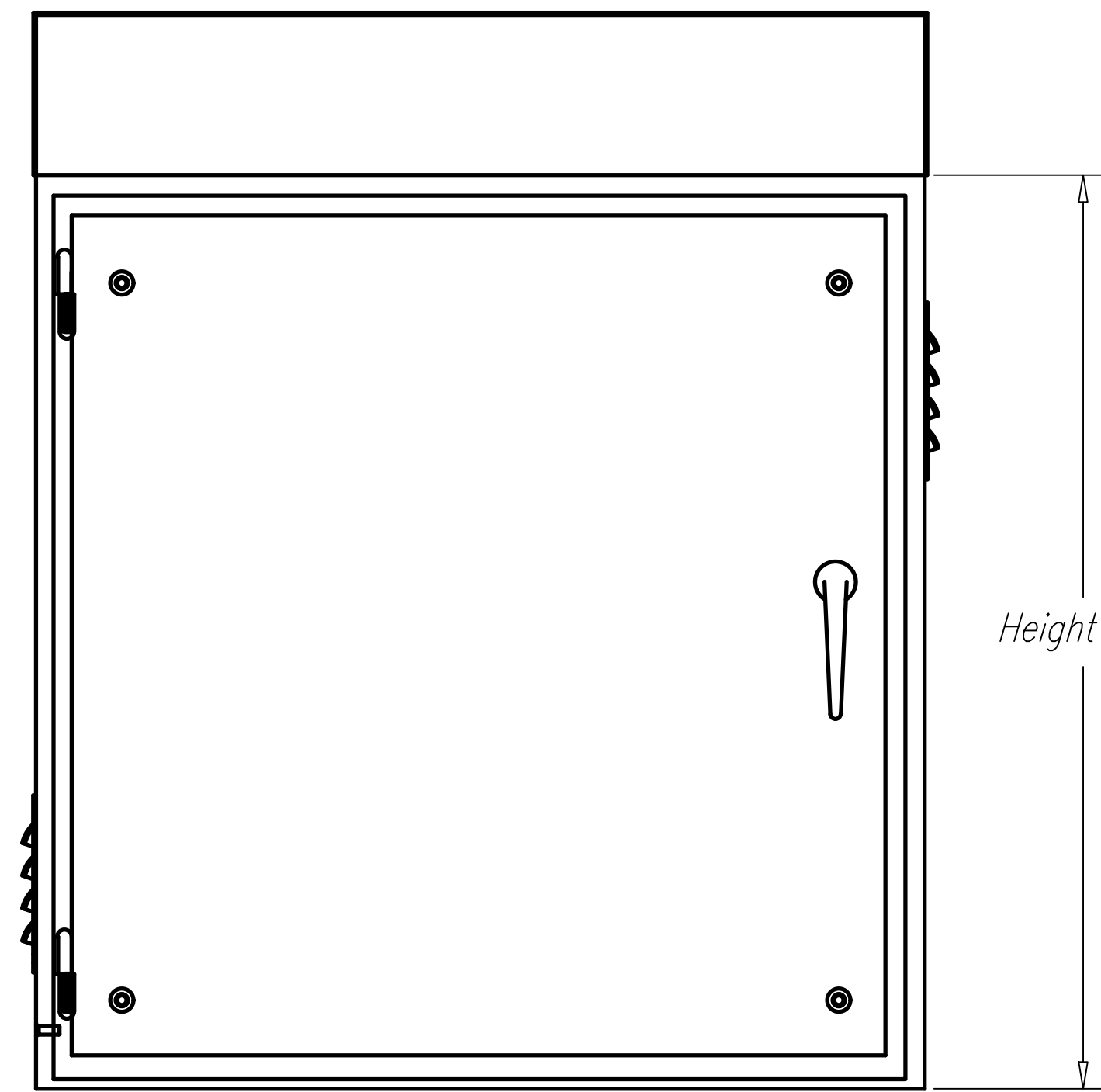
ITS
COMMUNICATIONS SYSTEM BLOCK DIAGRAM
 1 OF 2
 Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	67	111

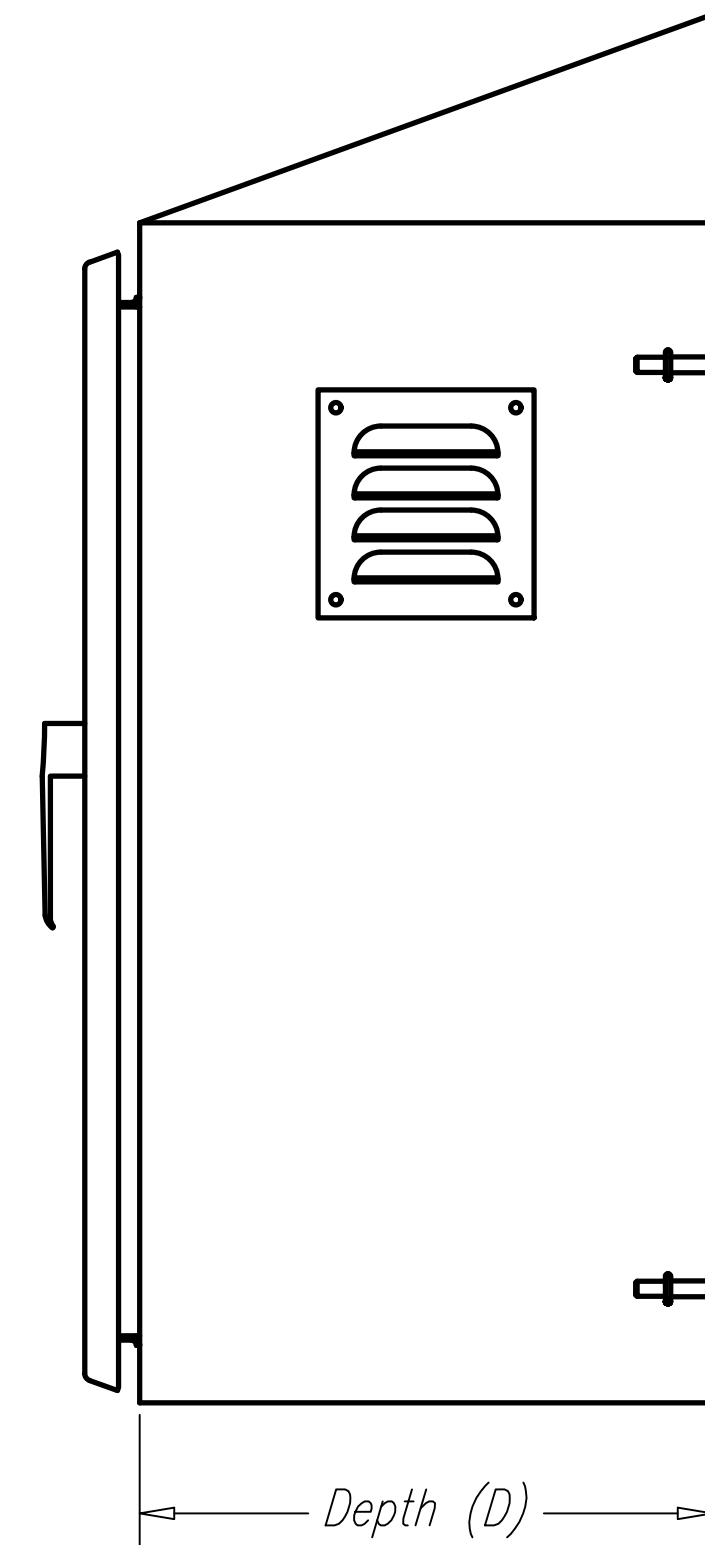


TOP VIEW

Cabinet Dimensions		
Height	Width	Depth
24"	24"	12"



FRONT VIEW



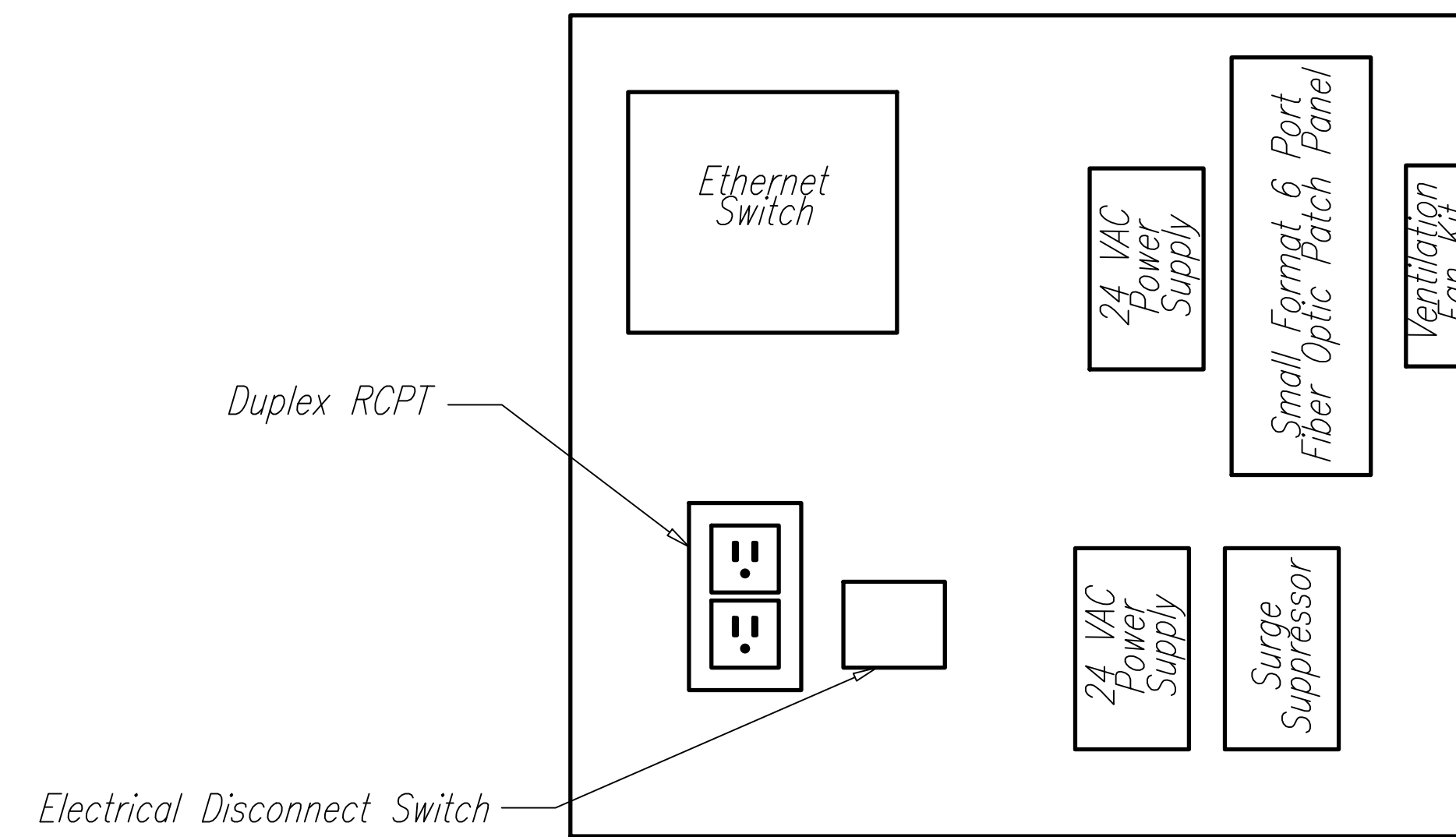
SIDE VIEW

DETAIL 1
NTS

C-38 NEMA 3R ENCLOSURE

NOTES:

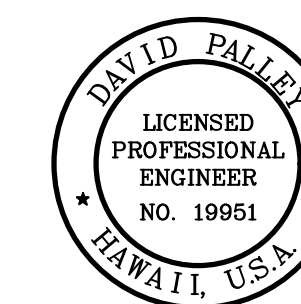
1. All Equipment Within the Interface Box are Din-Rail Mounted.
2. Submit Interface Box Layout and Wiring for Each Individual Site for Approval by the Engineer.
3. Install NEMA 3R Enclosure.
4. Where Indicated In Plans, Retrofit Enclosure for New MMFO Splice Cabinet on Existing Traffic Cabinet. No Additional Equipment Required.



DETAIL 2
NTS

PANEL AND EQUIPMENT LAYOUT C-38

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	No.
NOTE BOOK	



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SIGNATURE

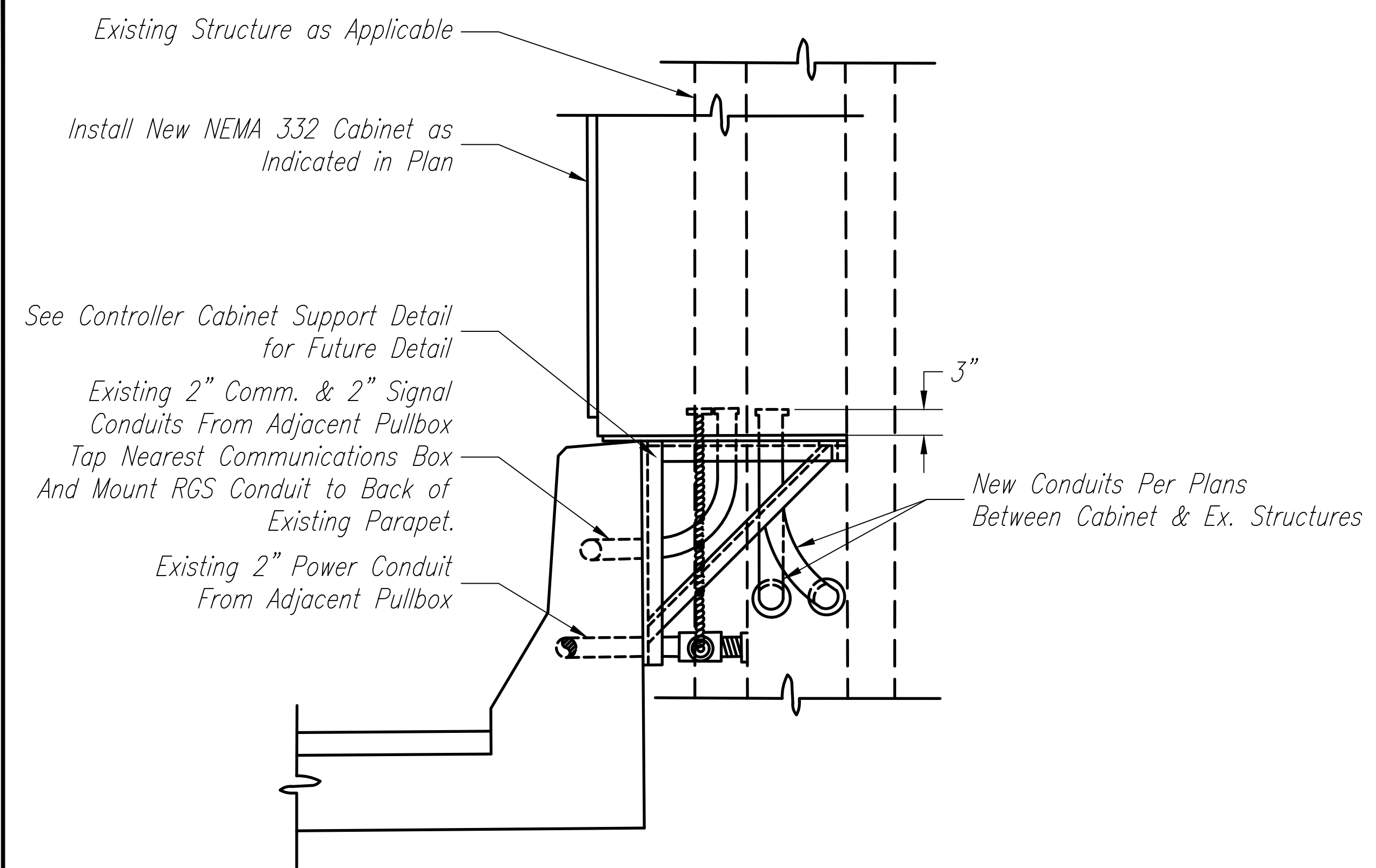
4/20/2028
EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

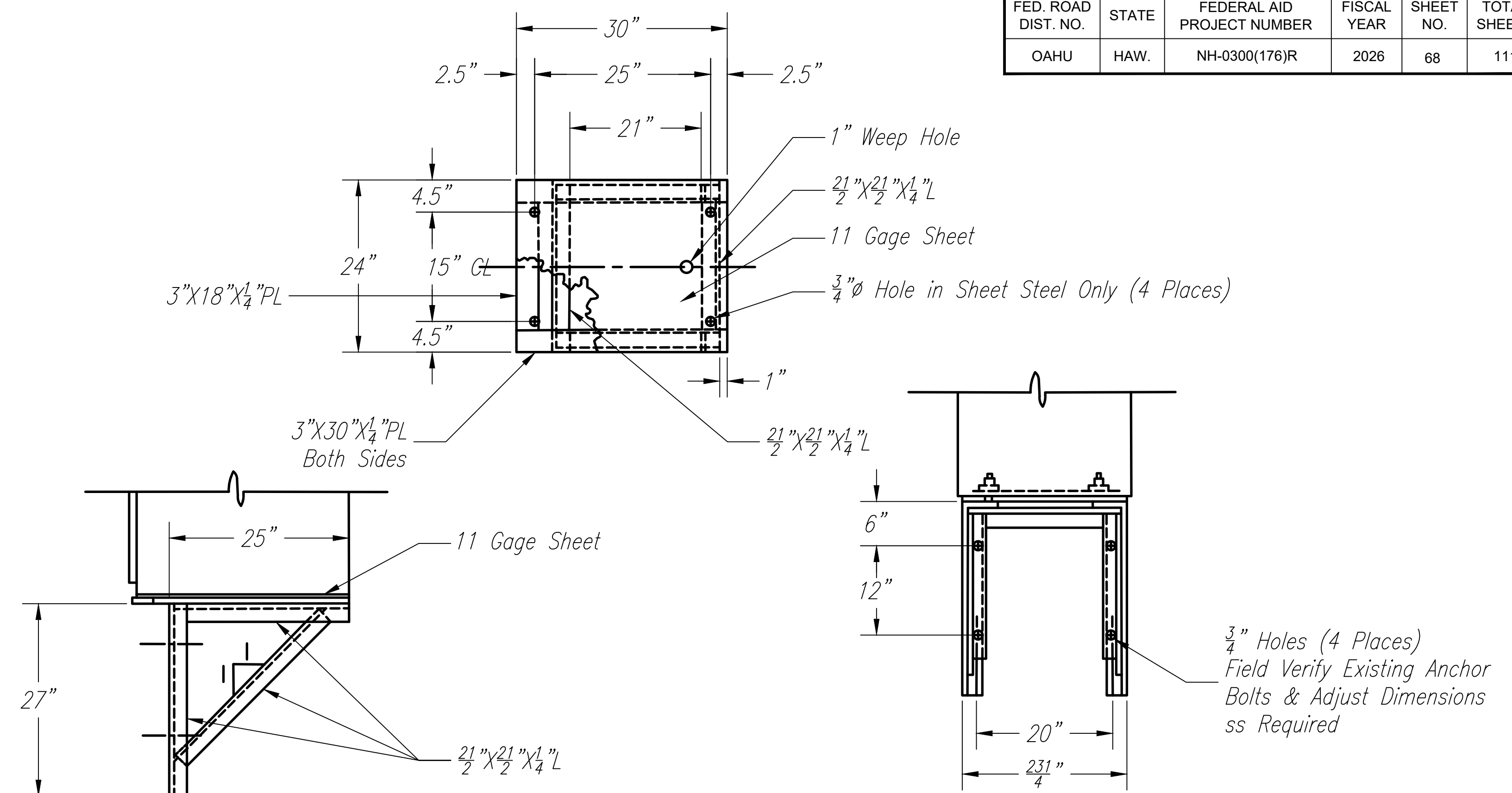
ITS
CABINET DETAILS
2 OF 3

Freeway Management System, Phase 4
Federal Aid Project No. NH-0300(176)R
Scale: As Indicated Date: April 2026

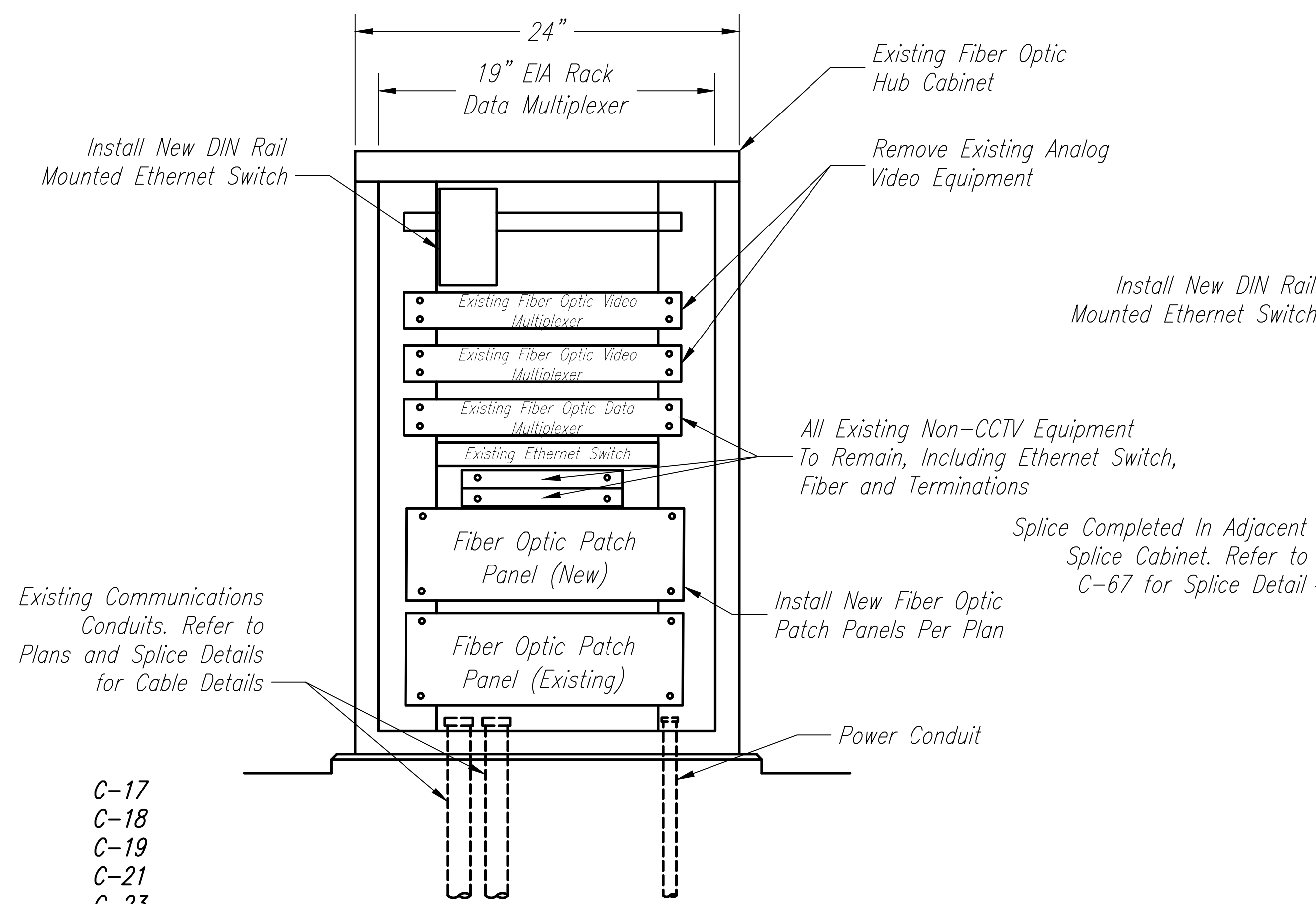
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	68	111



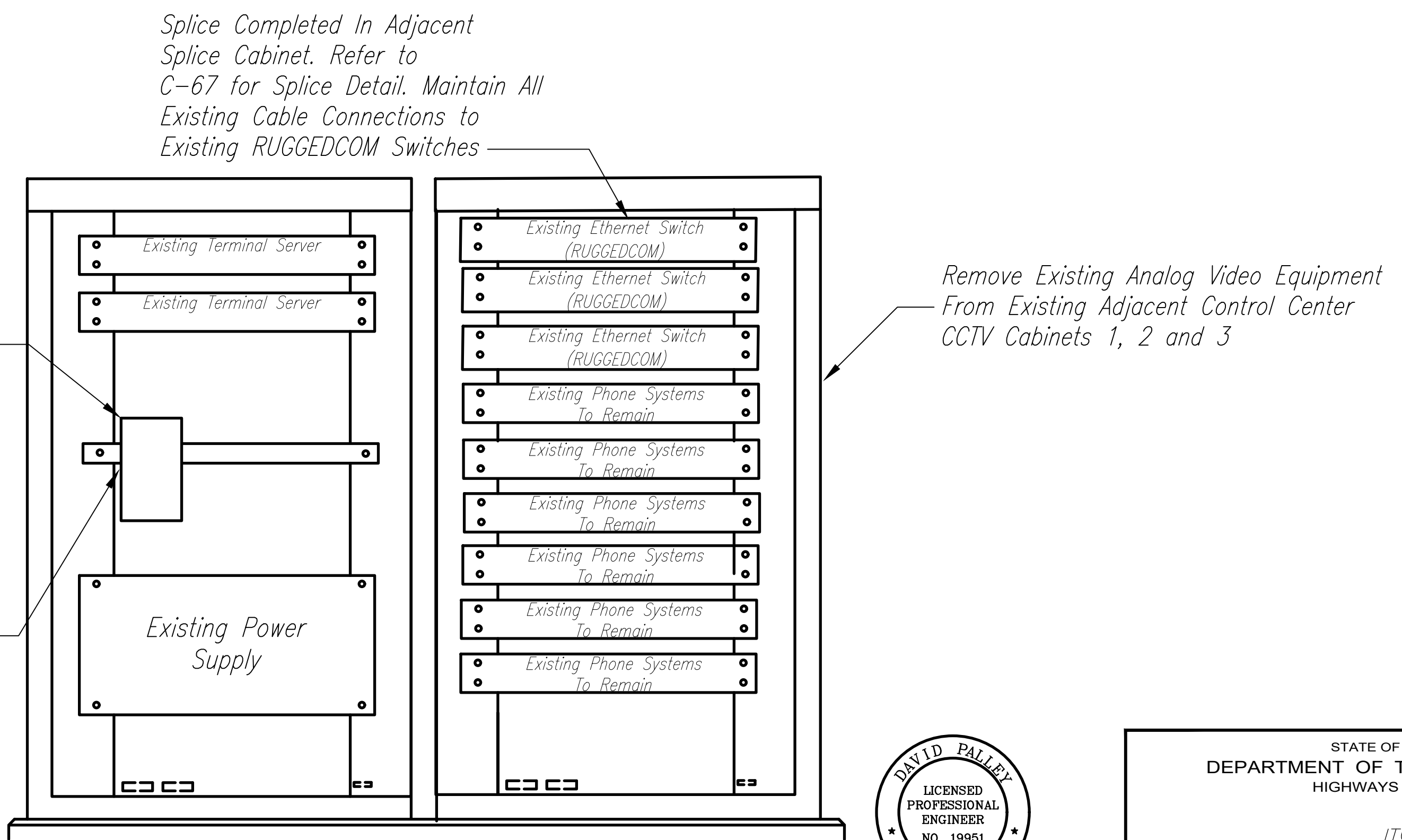
SIDE ELEVATION
CONTROLLER CABINET INSTALLATION DETAIL ON PARAPET
 NTS



CONTROLLER CABINET SUPPORT DETAIL
 NTS



TUNNEL FIBER OPTIC HUB CABINET DETAIL (Dimensions May Vary)
 NTS



HUB 14 CABINET DETAIL
 NTS

DATE	_____
DESIGNED BY	_____
CHECKED BY	_____
NO.	_____

- C-17
- C-18
- C-19
- C-21
- C-23
- C-24
- C-26



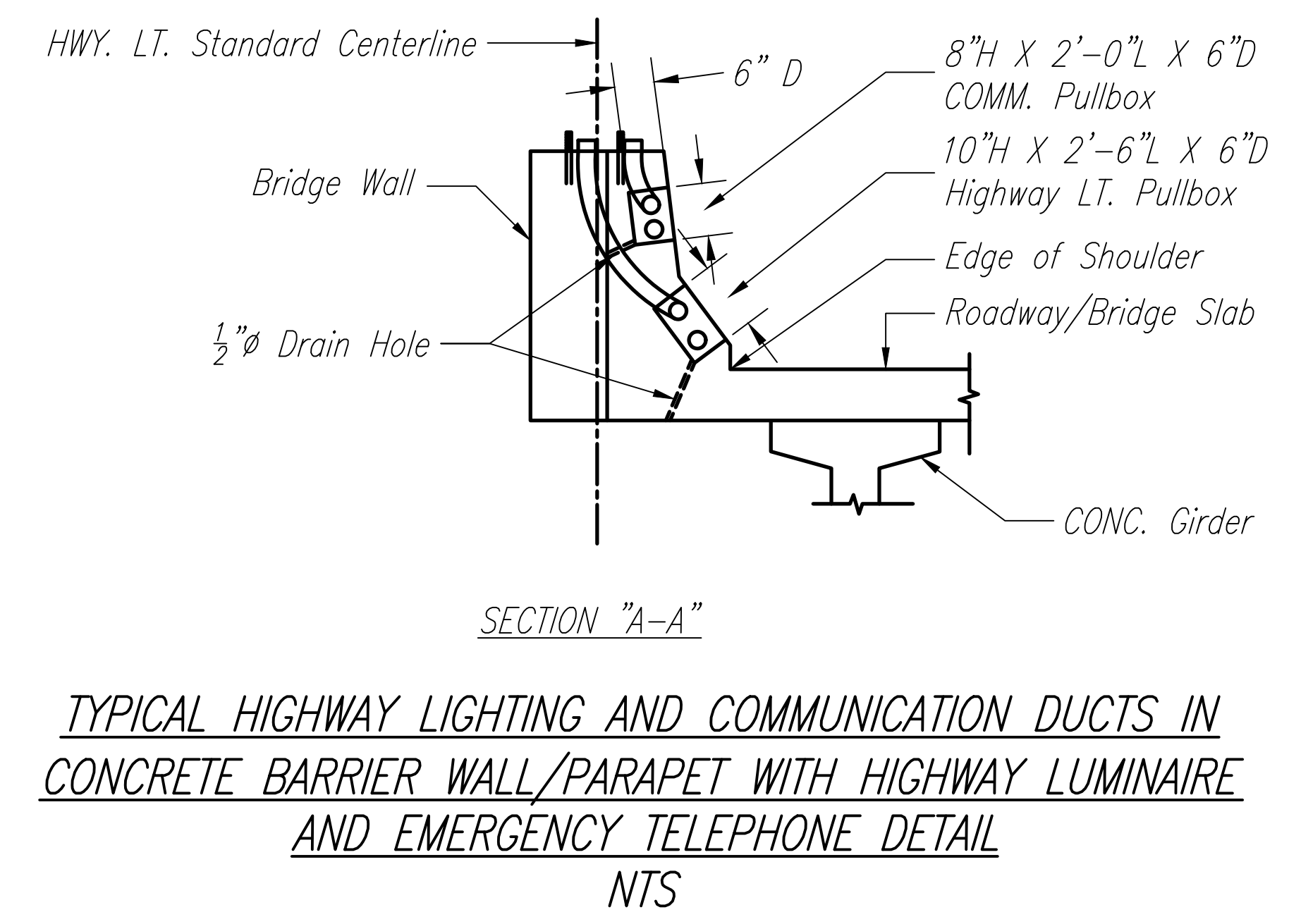
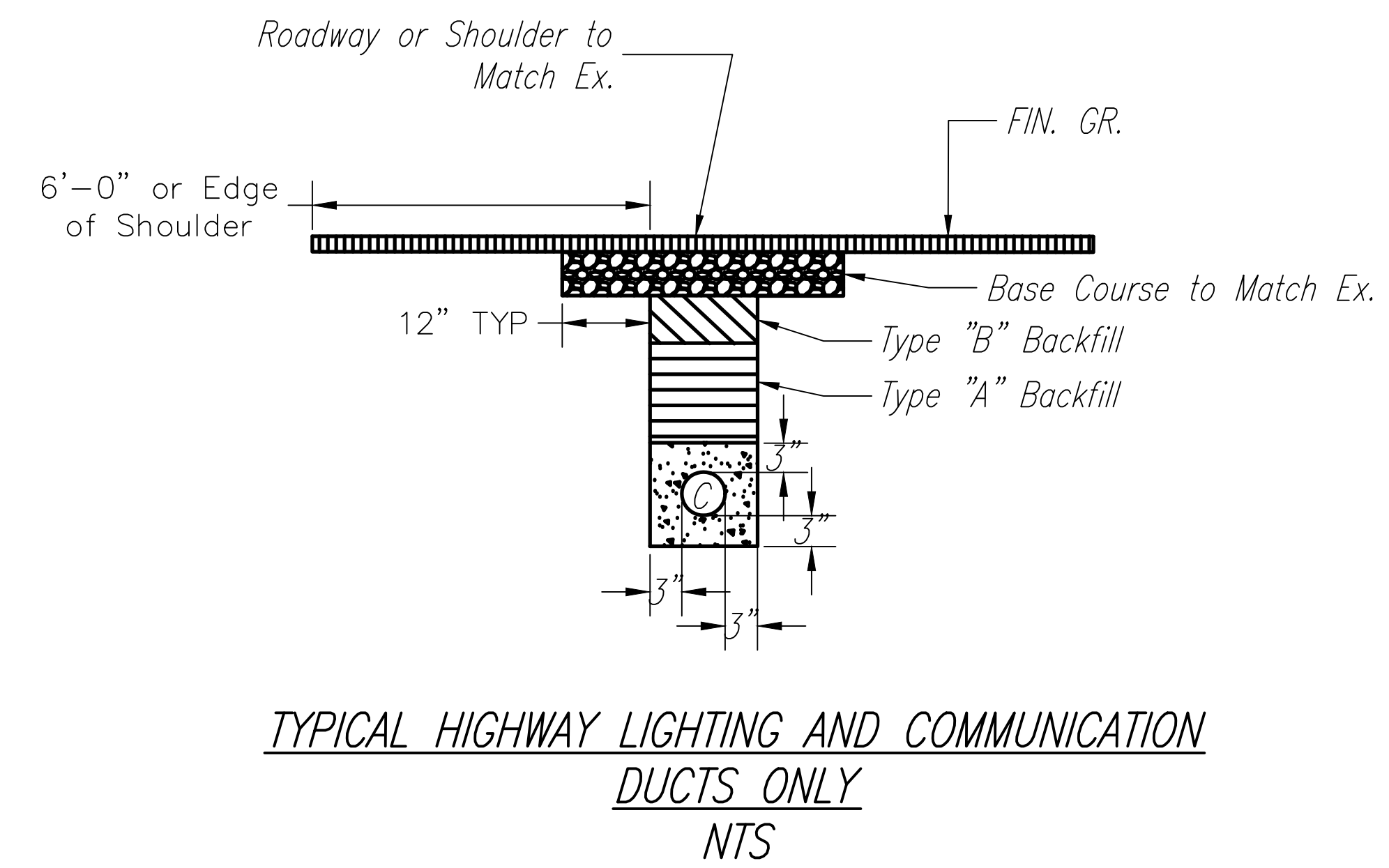
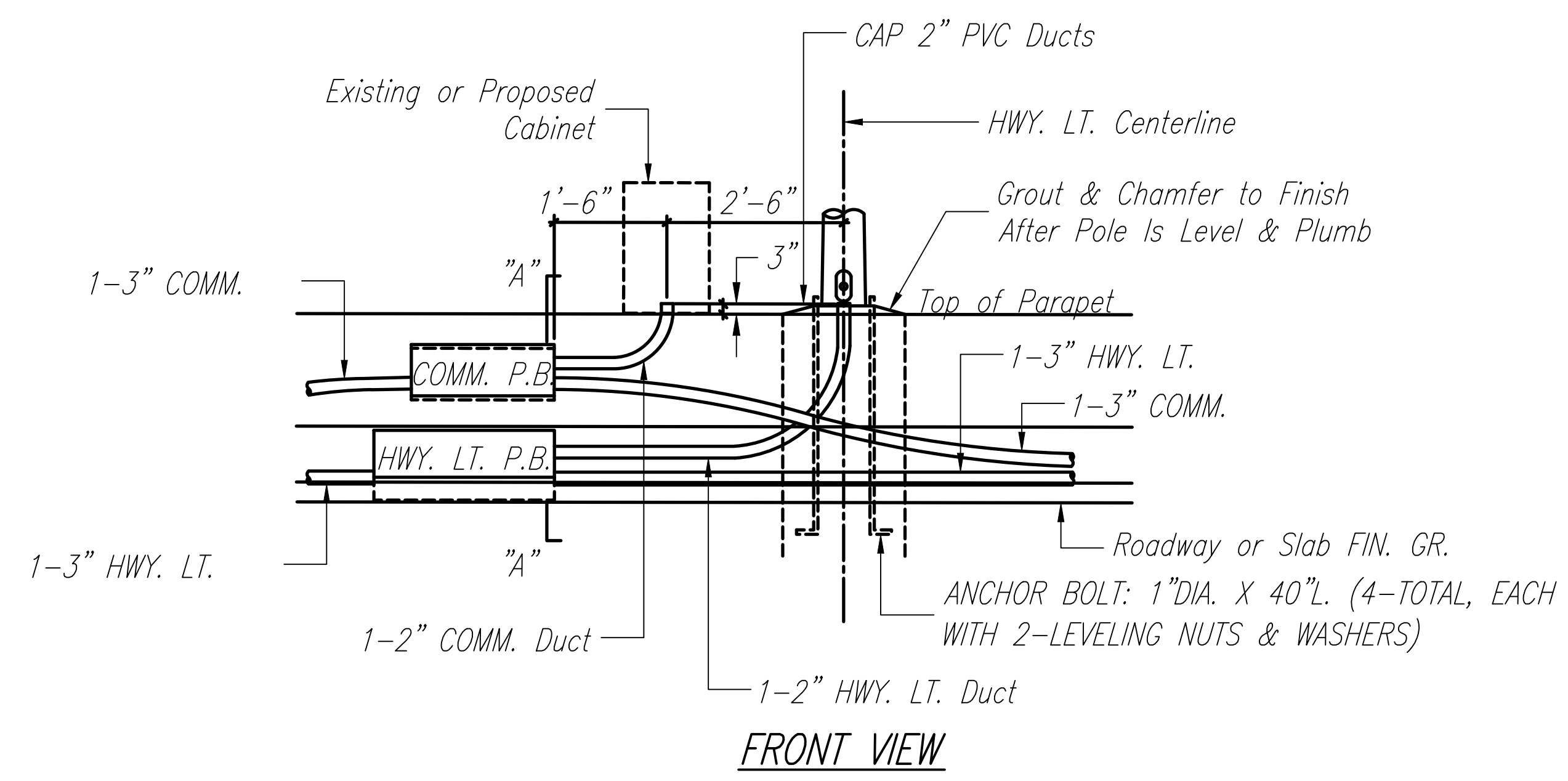
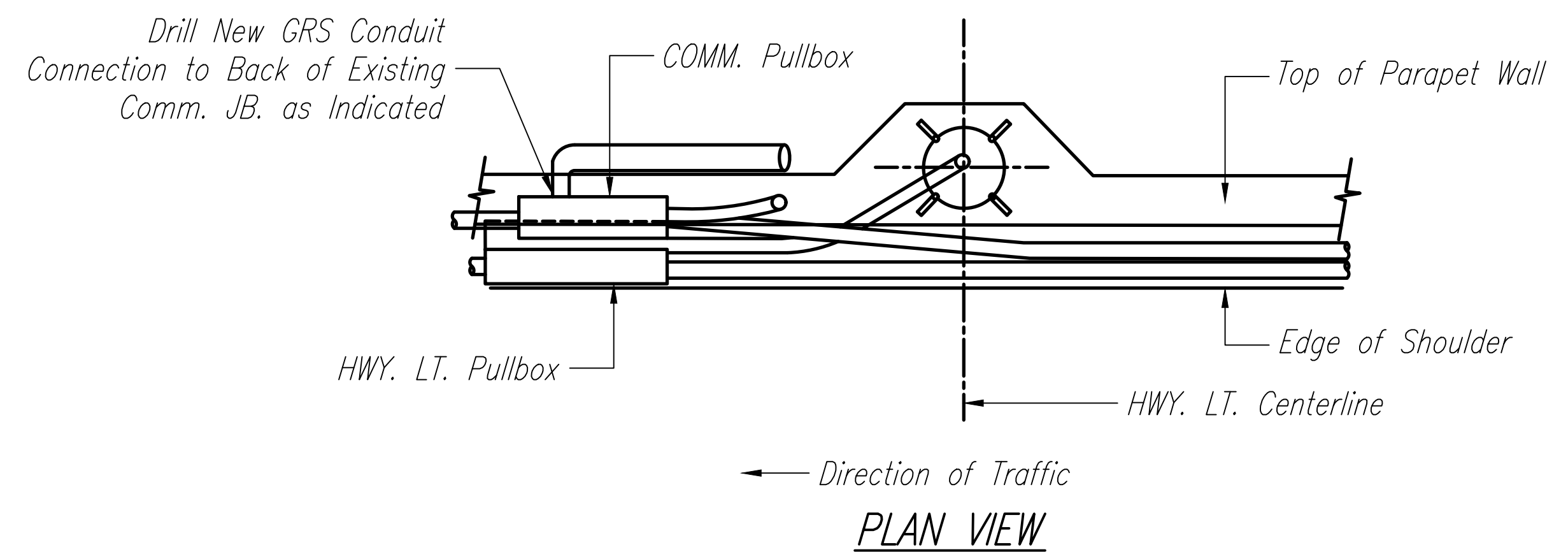
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
 Signature: _____
 EXPIRATION DATE OF LICENSE: 4/20/2028

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS
CABINET DETAILS
 3 OF 3

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	69	111



DATE	_____
DESIGNED BY	_____
CHECKED BY	_____
QUANTITIES BY	_____
DESIGNED BY	_____
TRACED BY	_____
DRAWN BY	_____
PLANNED BY	_____
NO. _____	_____



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David Palley

SIGNATURE

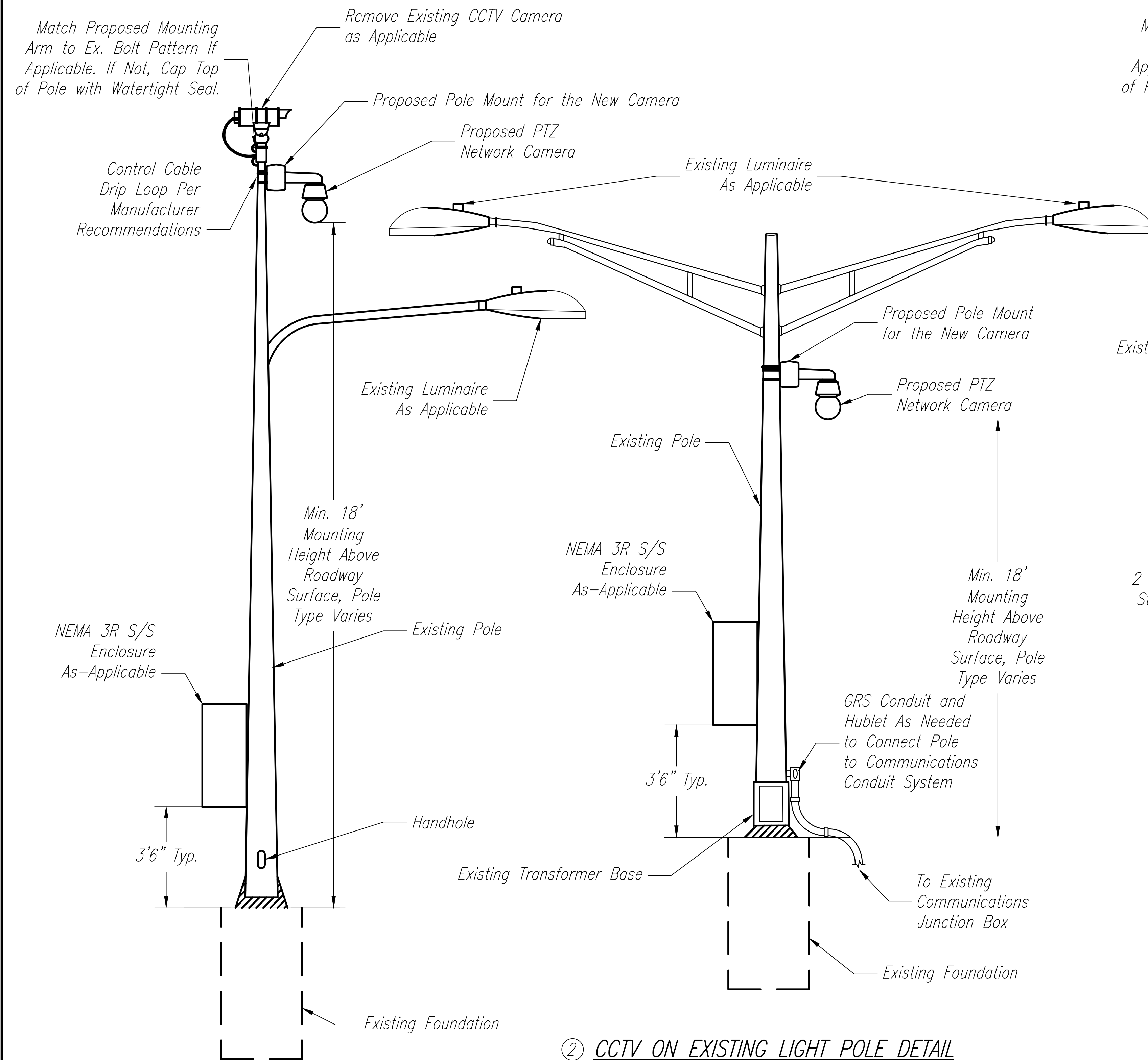
4/20/2028
EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ITS
CONDUIT AND JUNCTION BOX DETAILS

Freeway Management System, Phase 4
Federal Aid Project No. NH-0300(176)R
Scale: As Indicated Date: April 2026

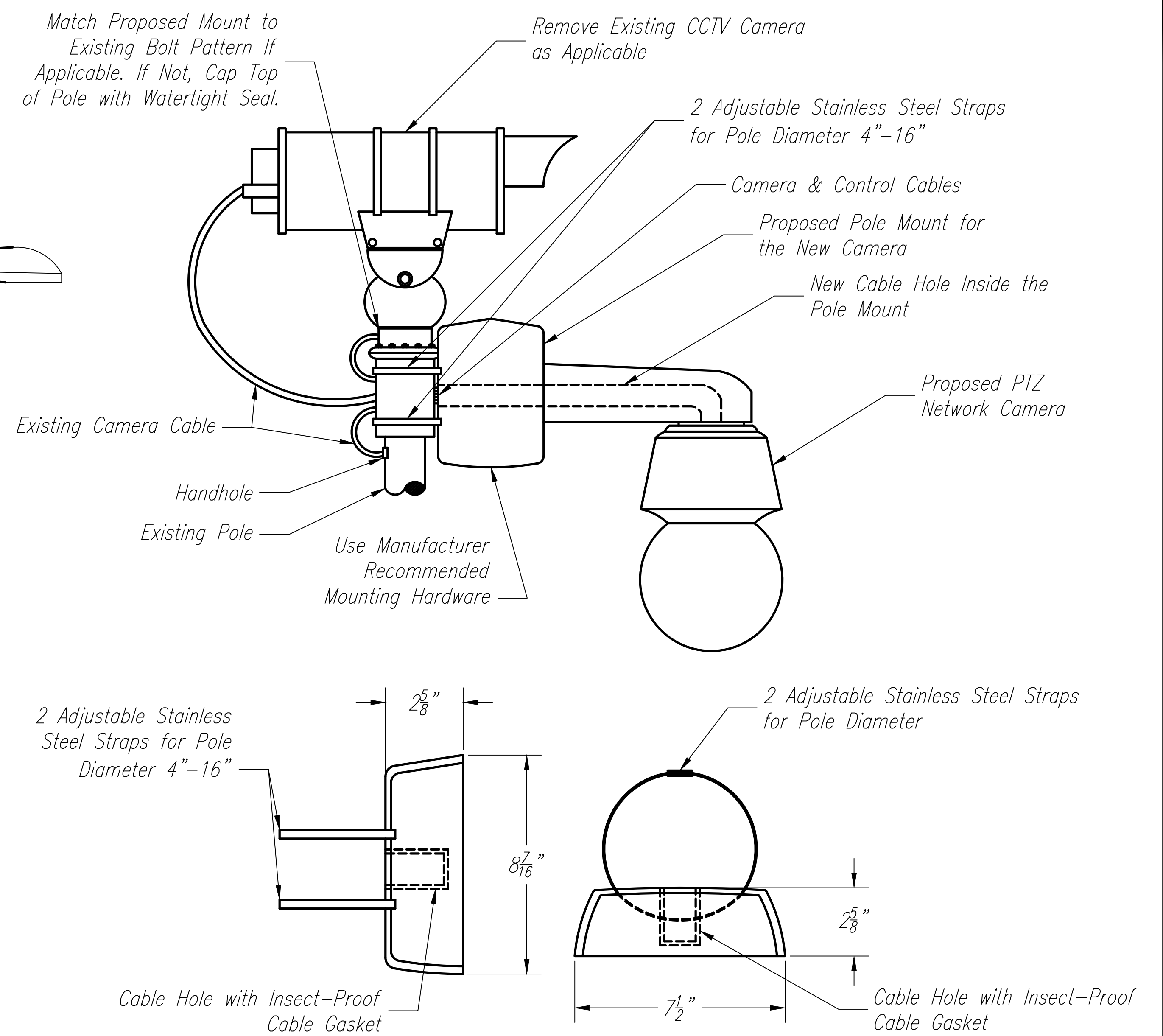
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	70	111



① CCTV ON EXISTING POLE DETAIL
NTS

- C-01 C-16
- C-02 C-17
- C-03 C-37
- C-04 C-38
- C-05 C-40
- C-06 C-41
- C-07 C-42
- C-08

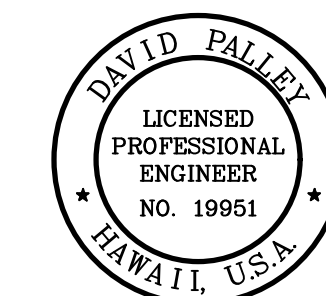
② CCTV ON EXISTING LIGHT POLE DETAIL
NTS



③ CCTV ON EXISTING POLE MOUNTING DETAIL
NTS

- C-01 C-17
- C-02 C-37
- C-03 C-38
- C-04 C-40
- C-05 C-41
- C-06 C-42
- C-07
- C-08
- C-16

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	



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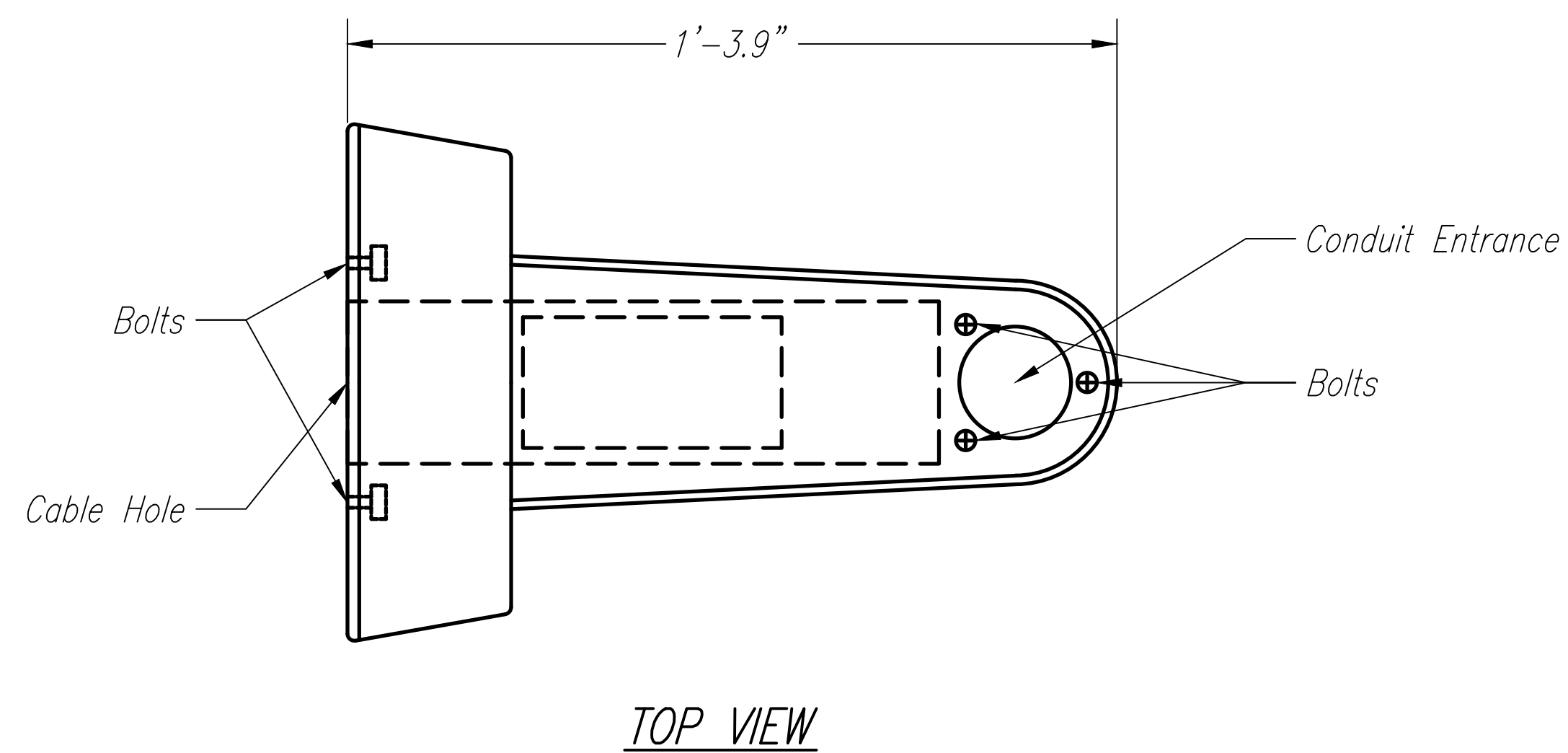
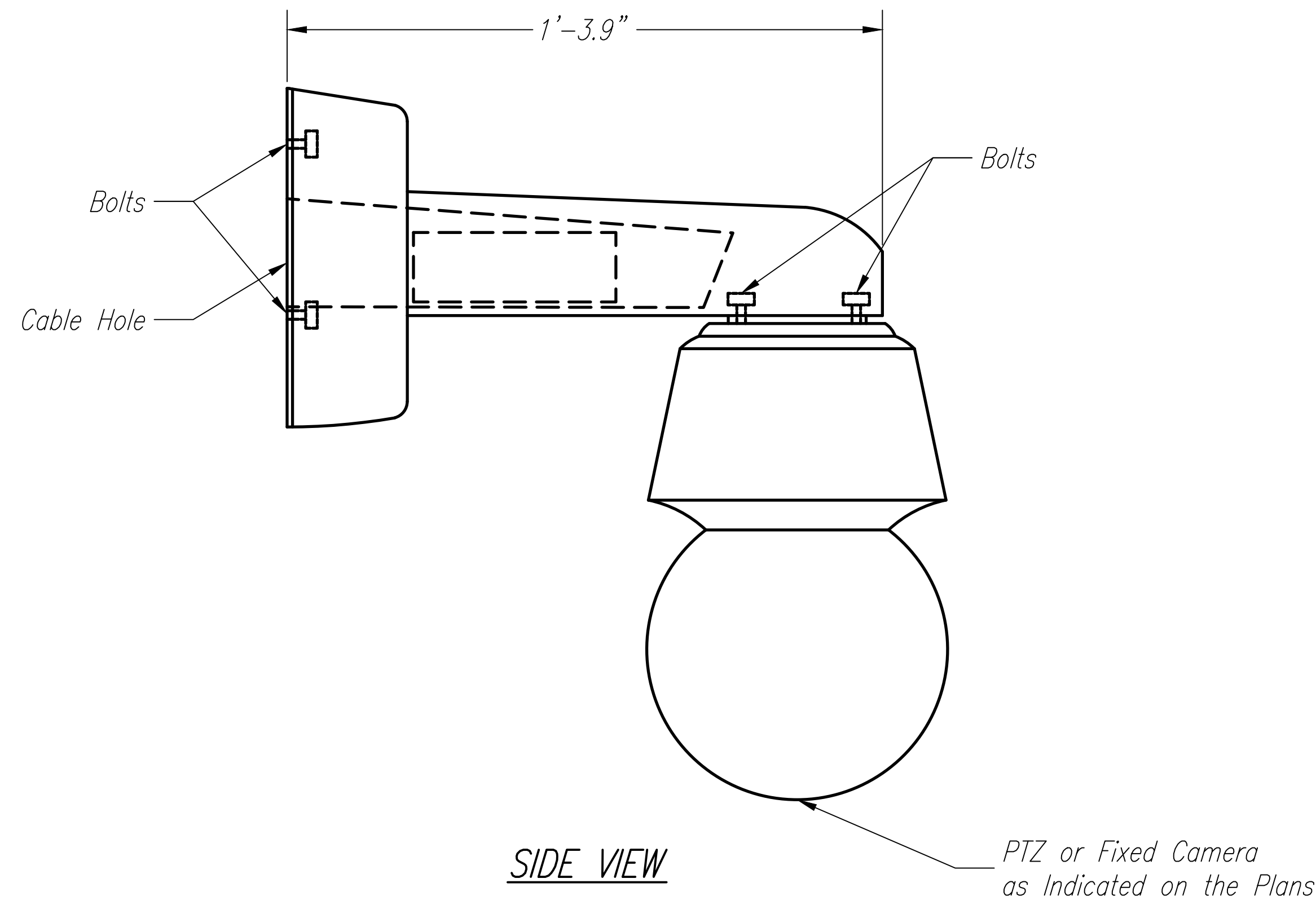
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS
CAMERA MOUNTING DETAILS
 1 OF 2

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

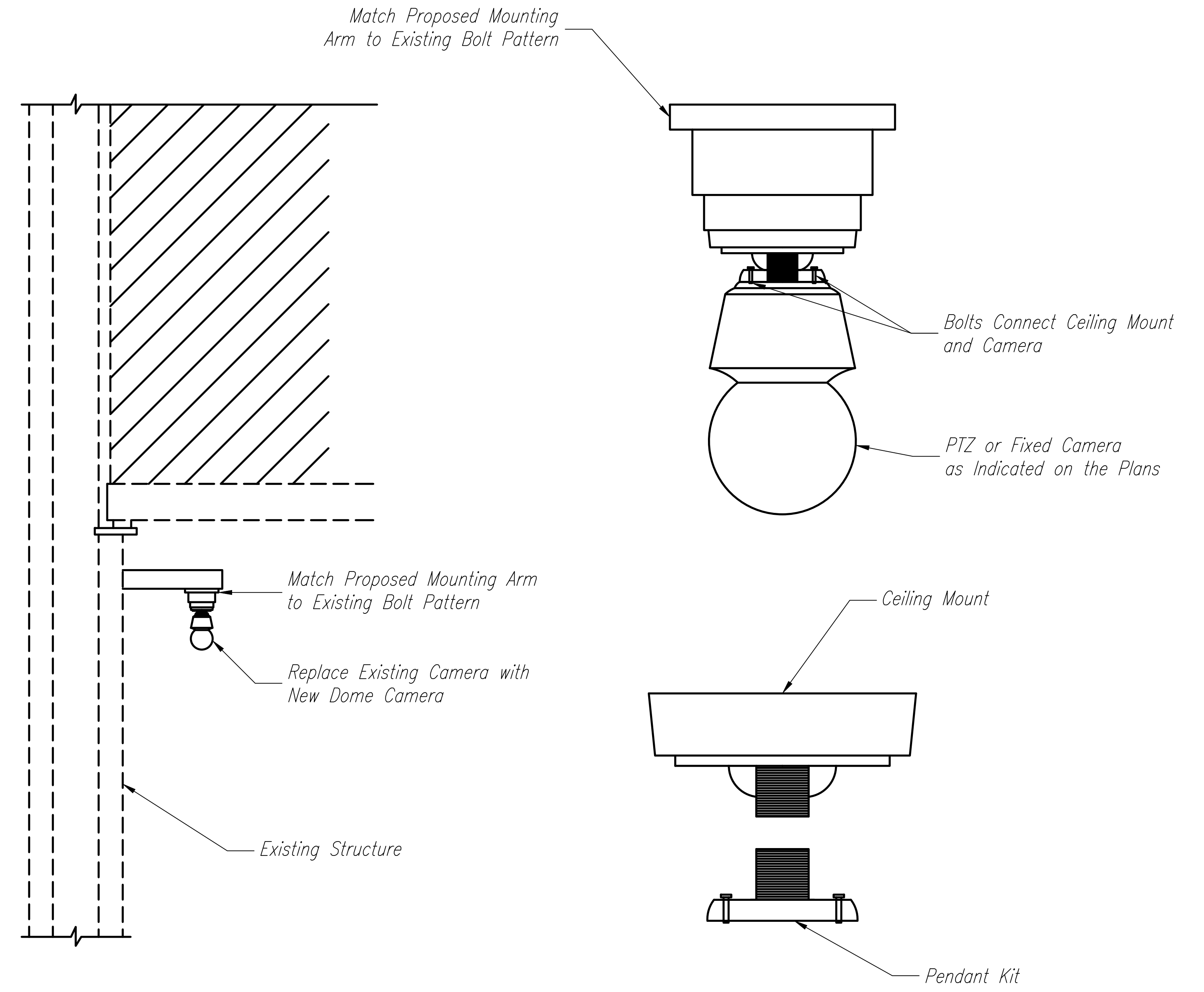
SHEET No. C-53 OF 111 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	71	111



① CCTV CAMERA WALL MOUNTING DETAIL
NTS

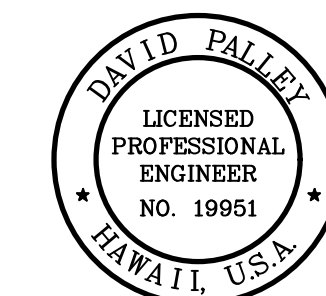
- C-17
- C-18
- C-19
- C-20
- C-21
- C-22
- C-23
- C-24
- C-25
- C-26



② CCTV CAMERA SIGN BRIDGE, TUNNEL GANTRY, AND CEILING MOUNTING DETAIL
NTS

- C-12
- C-16
- C-17
- C-18
- C-19
- C-20
- C-21
- C-22
- C-23
- C-24
- C-25
- C-26
- C-27
- C-32
- C-34

ORIGINAL PLAN	DATE
STAMPED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	



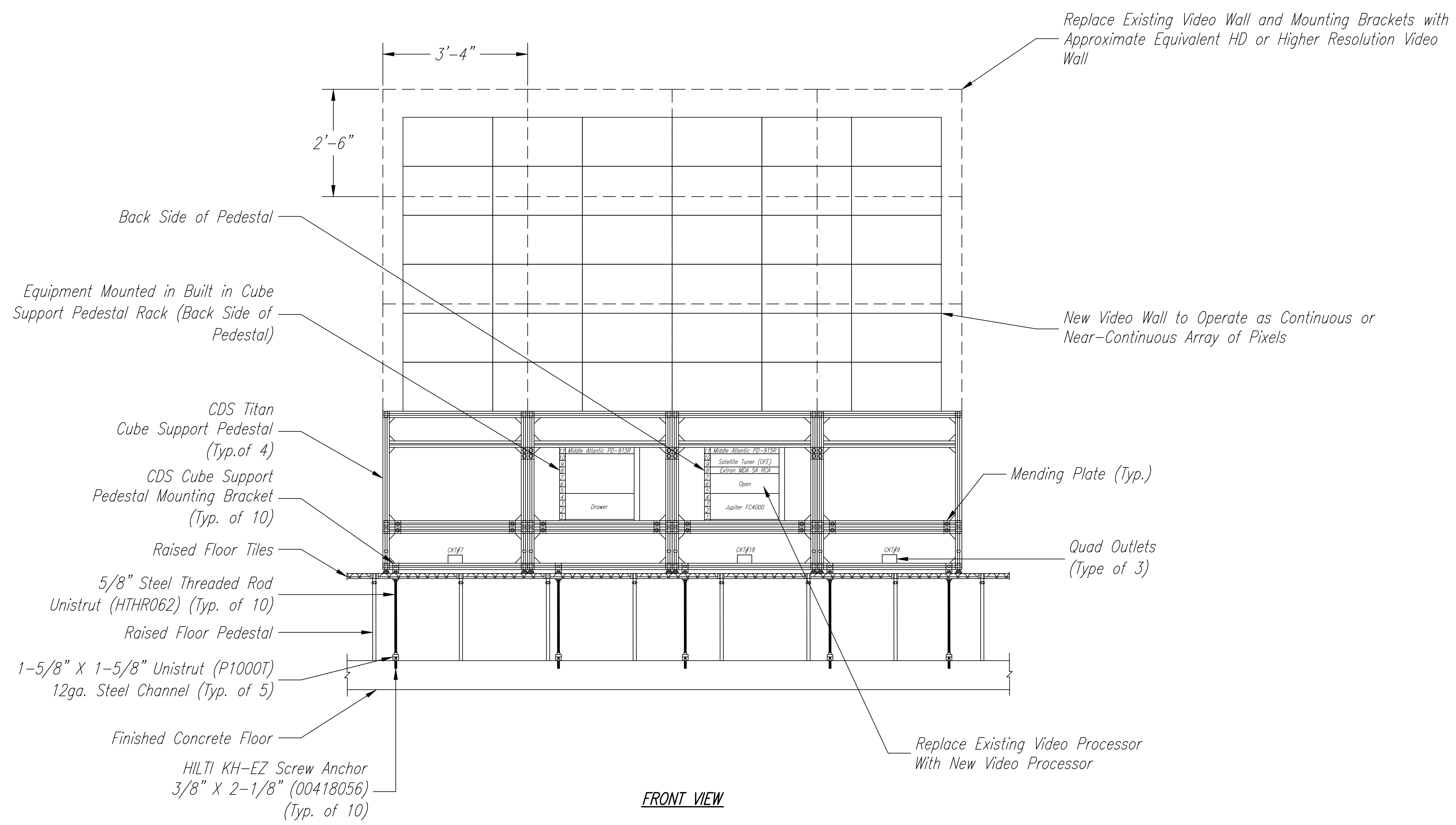
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David Palley
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 EXPIRATION DATE OF LICENSE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS
CAMERA MOUNTING DETAILS
 2 OF 2

Freeway Management System, Phase 4
Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	72	111



STUDY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

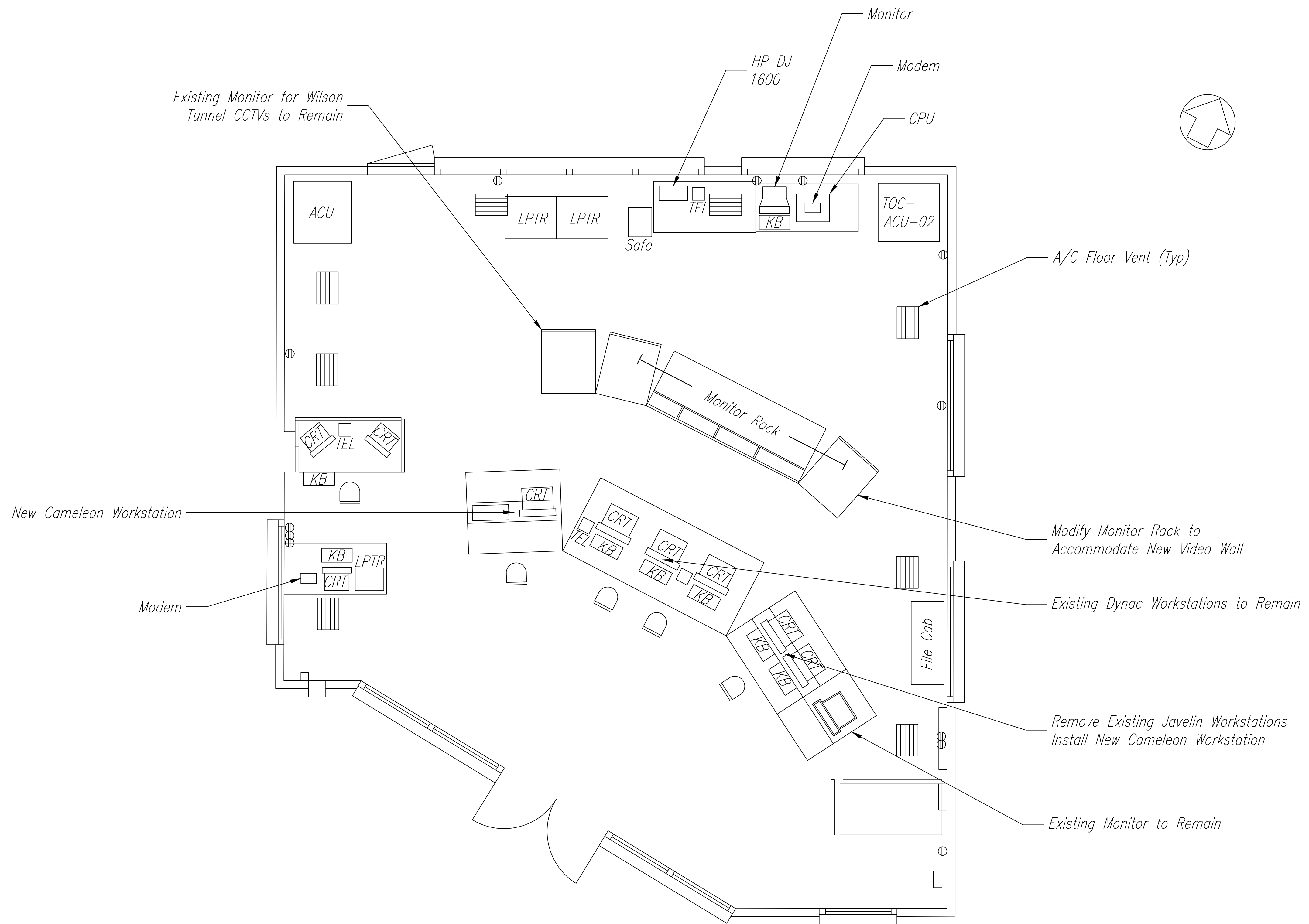


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 OF LICENSE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS
OPERATIONS CENTER VIDEO WALL DETAIL
 1 OF 2
 Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	73	111



ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

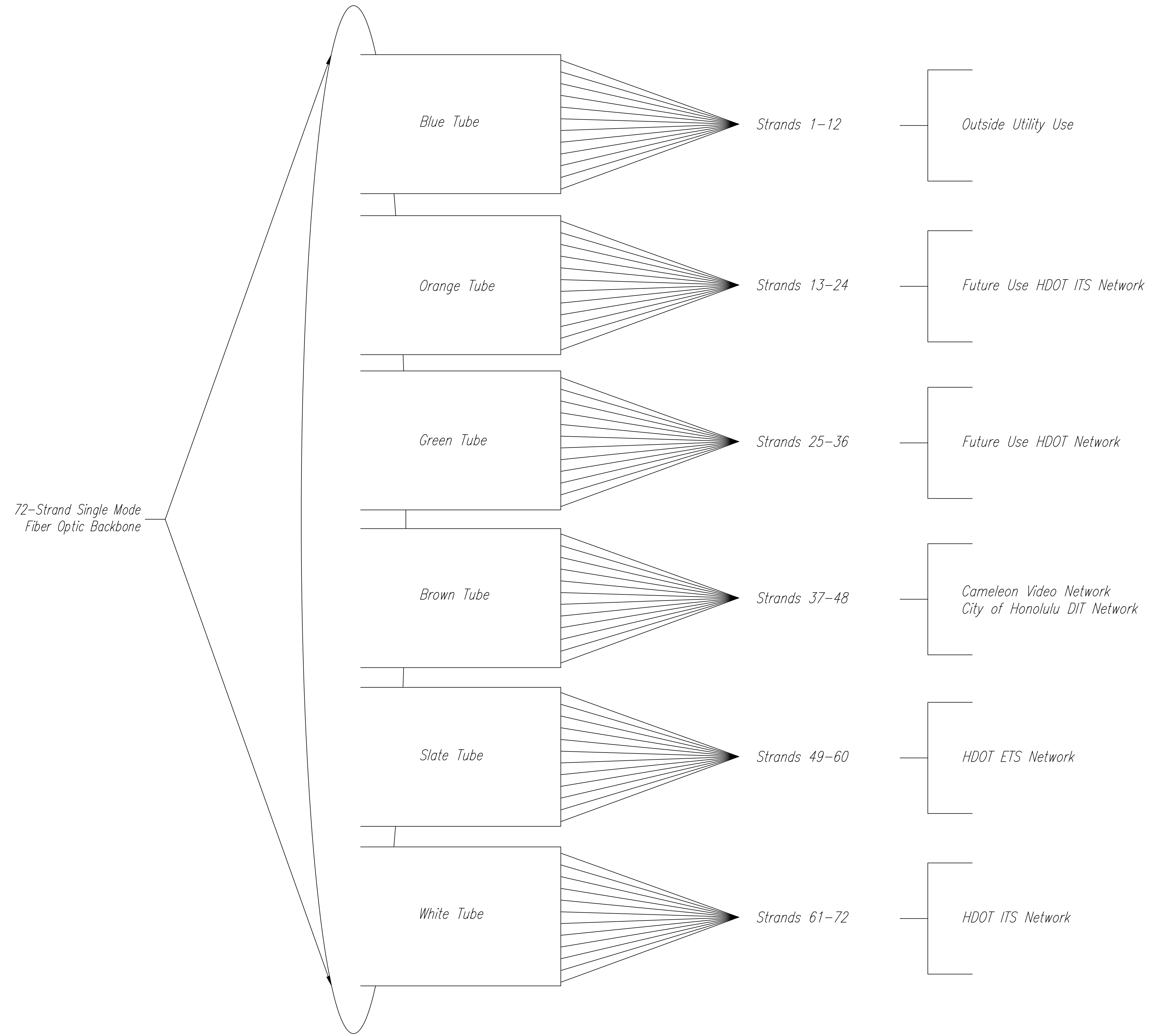


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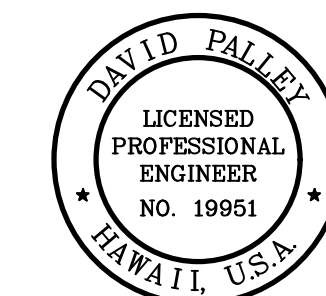
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS
OPERATIONS CENTER VIDEO WALL DETAIL
 2 OF 2
 Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	74	111



ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	



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SIGNATURE 4/20/2028
EXPIRATION DATE
OF LICENSE

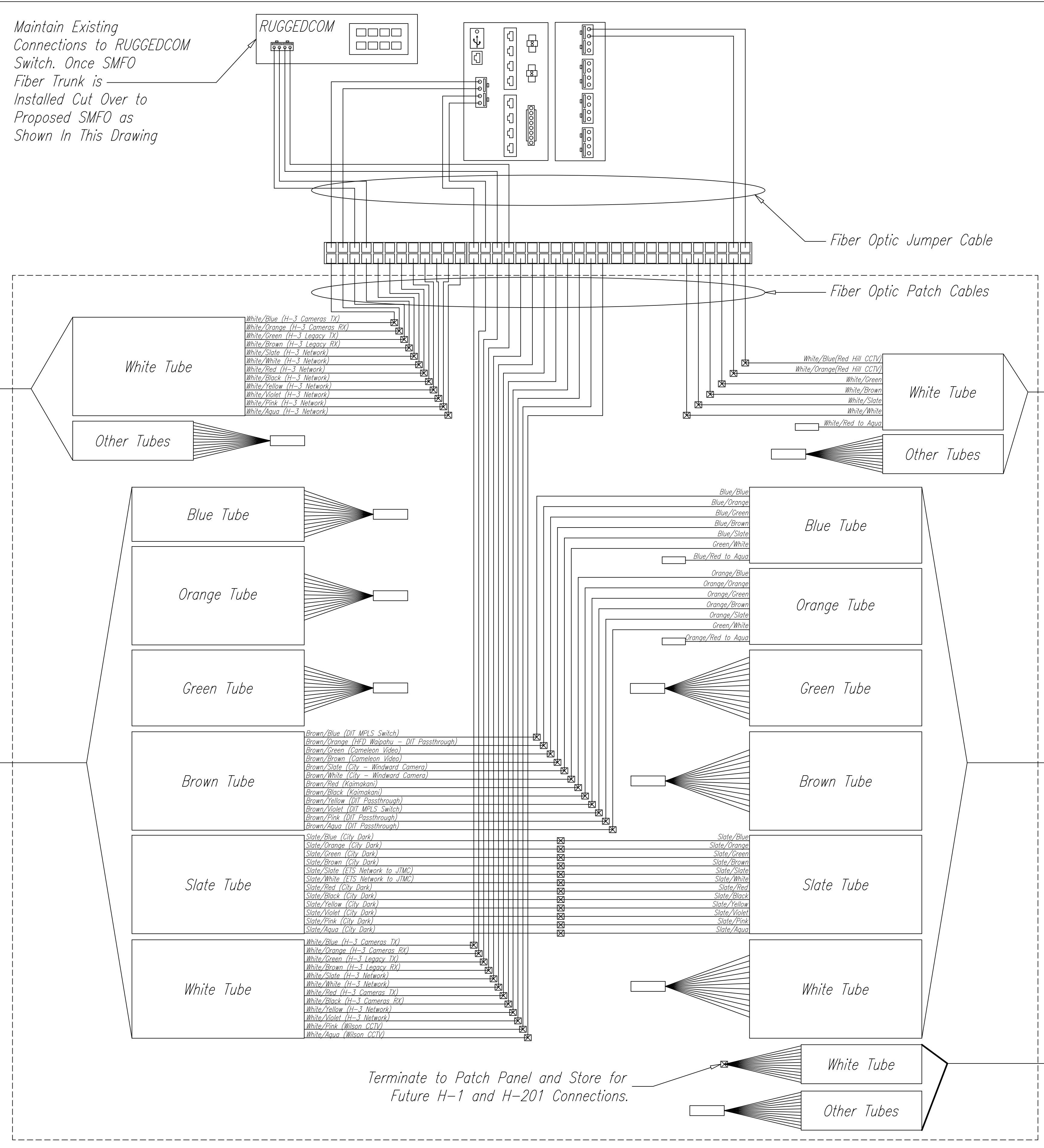
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ITS
TYPICAL FIBER OPTIC TRUNK ALLOCATION

Freeway Management System, Phase 4
Federal Aid Project No. NH-0300(176)R

Scale: As Indicated Date: April 2026

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	75	111



LEGEND

- Cisco IE3400 Ethernet Switch
- Fiber Optic Patch Panel
- Fusion Splice
- Cisco IE3400 8S Module
- Existing RUGGEDCOM Ethernet Switch
- Cap, Bundle, and Secure Underminated and Unspliced Fibers

NOTES:

1. All Splices Shall Be Fusion Splices. Unless Otherwise Indicated, Terminate and Patch Through All Un-Allocated Fibers for Future Use.
2. 12 Strand Lateral Fiber Splices Omitted for Clarity. Refer to Details on Sheet C-63 for Lateral Fiber Splice Typical Details.



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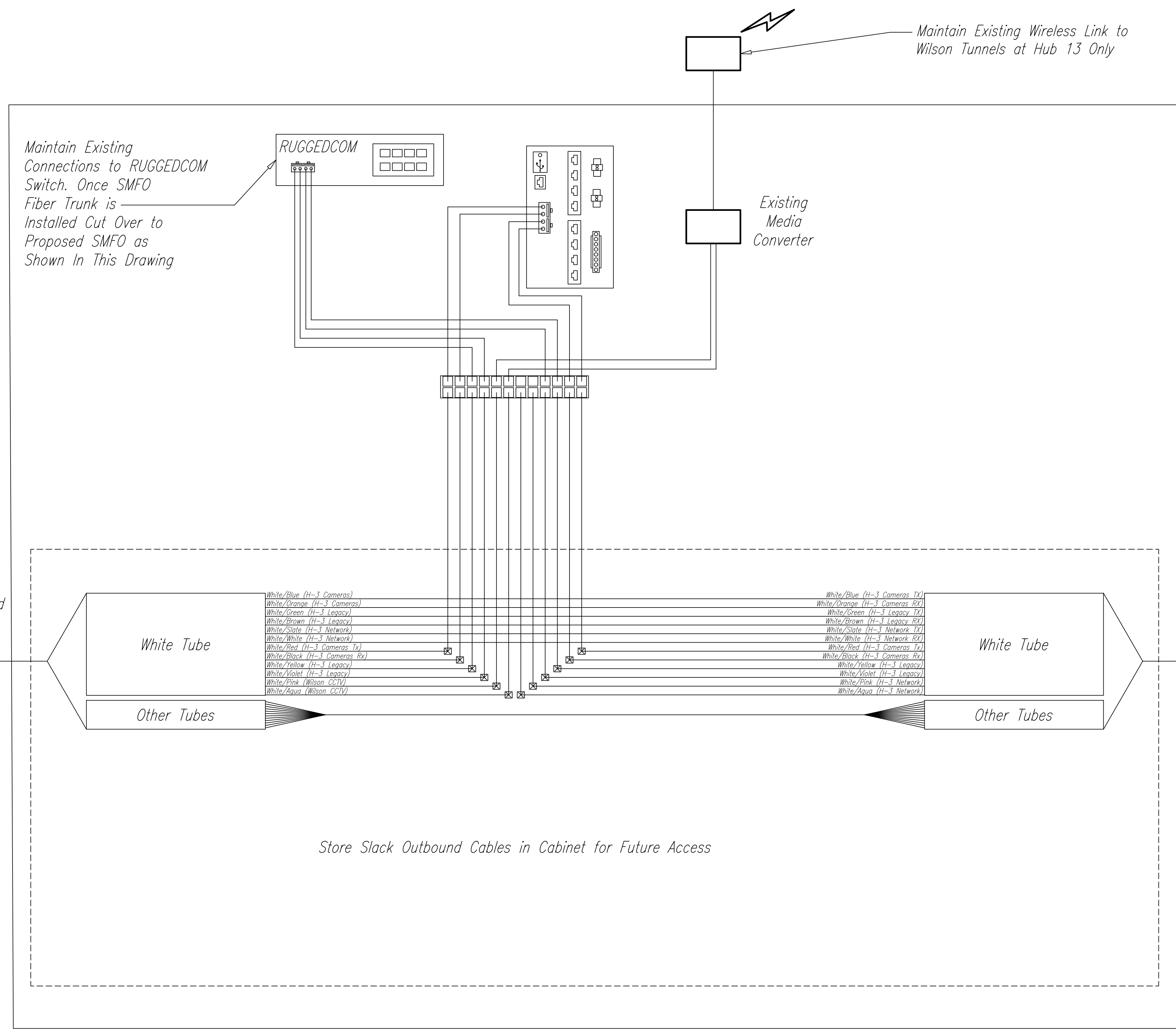
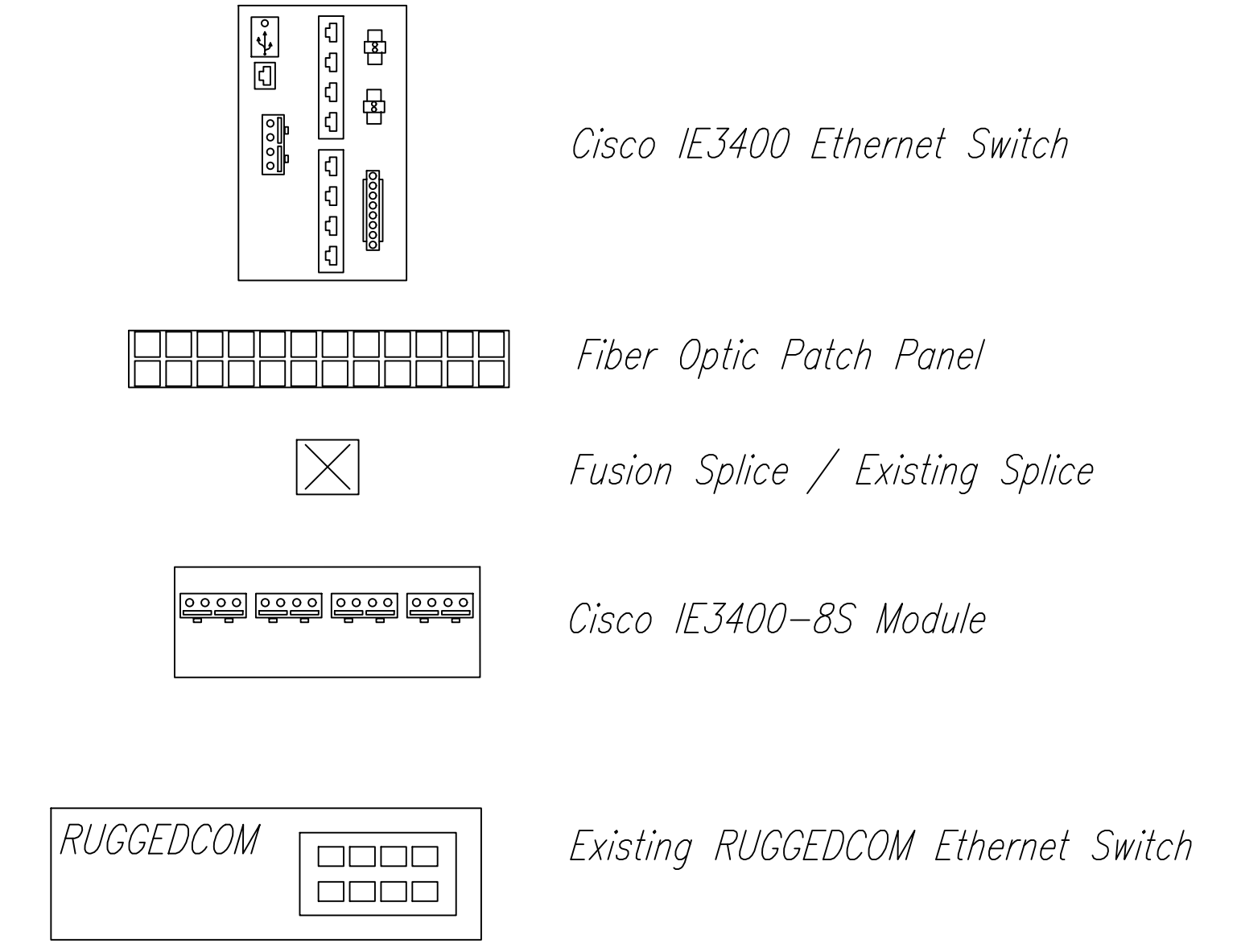
ITS
HUB 1 CABINET SPLICE DETAIL

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

ORIGINAL PLAN	DATE
NO. _____	_____
SURVEY PLOTTED BY _____	DATE _____
DRAWN BY _____	DESIGNED BY _____
TRACED BY _____	QUANTITIES BY _____
NOTE BOOK	CHECKED BY _____
No. _____	

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	76	111

LEGEND



- | | |
|------------------------------|-------------------------------|
| White/Blue (H-3 Cameras) | White/Blue (H-3 Cameras TX) |
| White/Orange (H-3 Cameras) | White/Orange (H-3 Cameras RX) |
| White/Green (H-3 Legacy) | White/Green (H-3 Legacy TX) |
| White/Brown (H-3 Legacy) | White/Brown (H-3 Legacy RX) |
| White/Slate (H-3 Network) | White/Slate (H-3 Network TX) |
| White/White (H-3 Network) | White/White (H-3 Network RX) |
| White/Red (H-3 Cameras Tx) | White/Red (H-3 Cameras Rx) |
| White/Black (H-3 Cameras Rx) | White/Black (H-3 Cameras Tx) |
| White/Yellow (H-3 Legacy) | White/Yellow (H-3 Legacy) |
| White/Violet (H-3 Legacy) | White/Violet (H-3 Legacy) |
| White/Pink (Wilson CCTV) | White/Pink (H-3 Network) |
| White/Aqua (Wilson CCTV) | White/Aqua (H-3 Network) |

NOTES:

- All Splices Shall be Fusion Splices Unless Otherwise Indicated. Terminate and Patch Through All Un-Allocated Fibers for Future Use.
- 12 Strand Lateral Fiber Splices Omitted for Clarity. Refer to Details on Sheet C-63 for Lateral Fiber Splice Typical Details.

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NO.	



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EXPIRATION DATE OF LICENSE

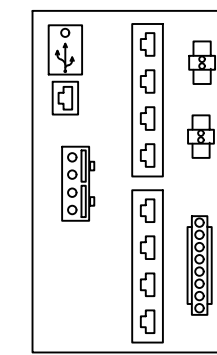
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ITS
HUB 2 AND HUB 13 SPLICE DETAILS

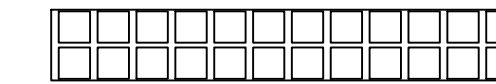
Freeway Management System, Phase 4
Federal Aid Project No. NH-0300(176)R
Scale: As Indicated Date: April 2026

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	77	111

LEGEND



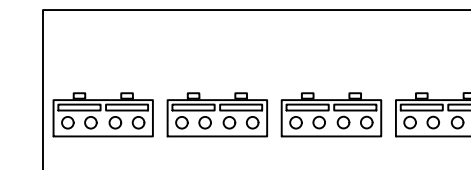
Cisco IE3400 Ethernet Switch



Fiber Optic Patch Panel



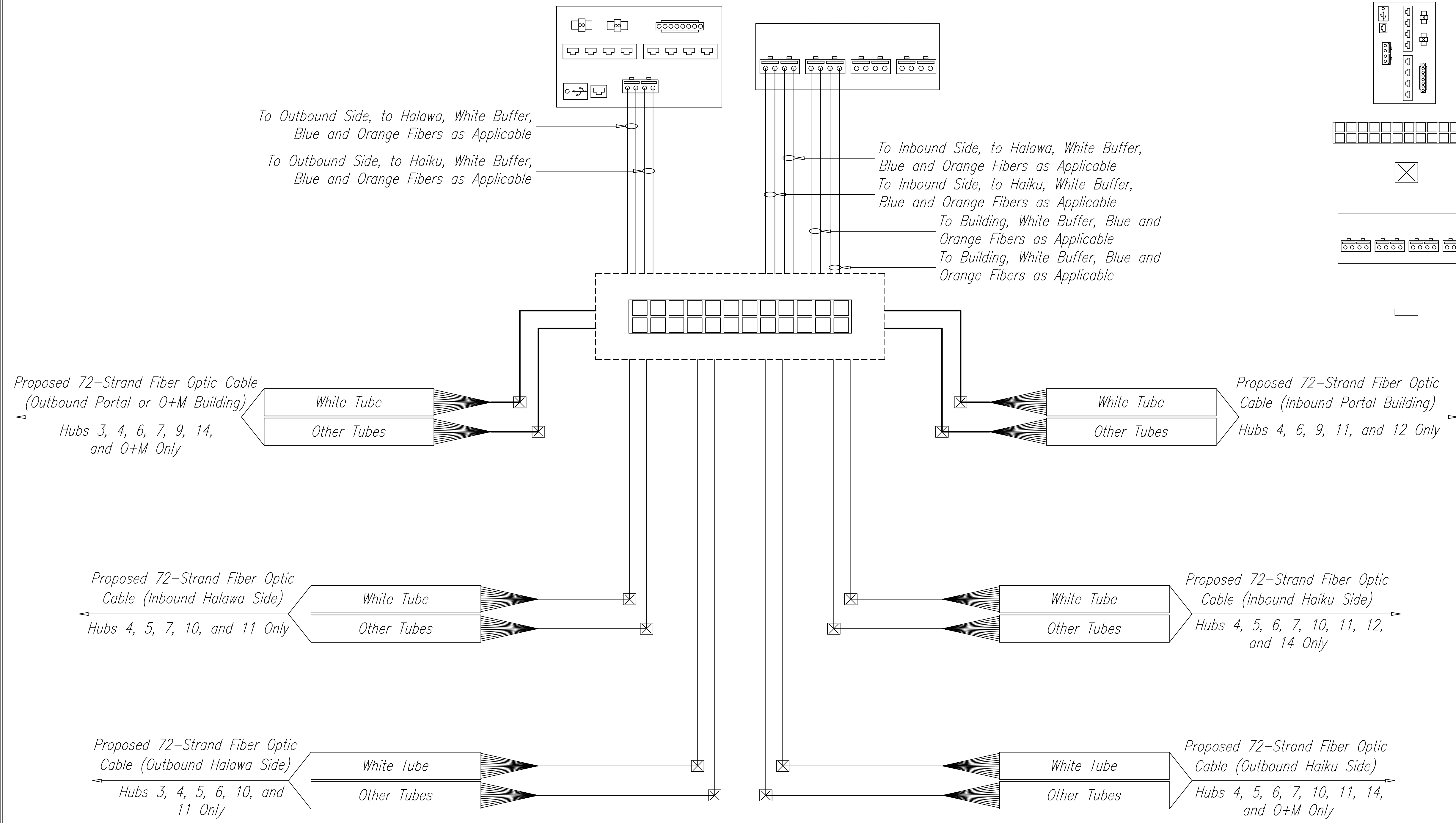
Fusion Splice / Existing Splice



Cisco IE3400-8S Module



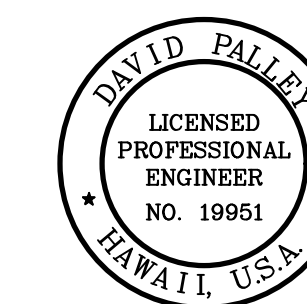
Cap, Bundle, and Secure Underminated and Unspliced Fibers



NOTES:

1. All Splices Shall Be Fusion Splices. Unless Otherwise Indicated, Terminate and Patch Through All Un-Allocated Fibers for Future Use.
2. Existing Multimode Splices and Cables Omitted for Clarity.
3. Existing Fiber and Serial Equipment to Remain Functional Throughout and Following Construction. Proposed Fiber Network to be Installed Parallel and Carry CCTV Camera IP Communications Only.

DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
TRACED BY	_____
DESIGNED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____
No.	_____



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

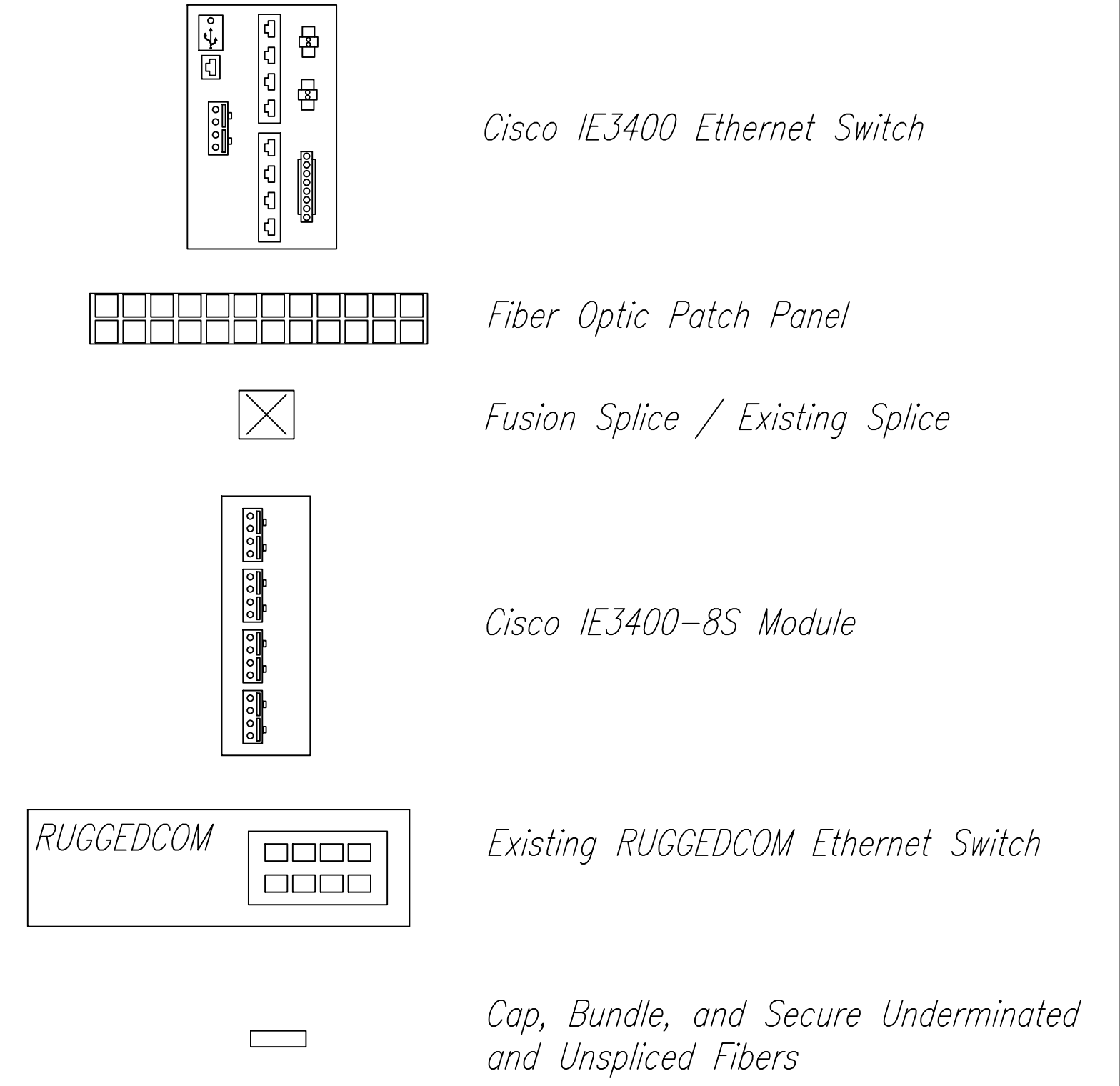
ITS
HUB 3,4,5,6,7,9,10,11,12,14 SPlice DETAILS

Freeway Management System, Phase 4
Federal Aid Project No. NH-0300(176)R

Scale: As Indicated Date: April 2026

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	78	111

LEGEND



NOTES:

1. All Splices Shall be Fusion Splices. Unless Otherwise Indicated. Terminate and Patch Through All Un-Allocated Fibers for Future Use.
2. 12 Strand Lateral Fiber Splices Omitted for Clarity. Refer to Details on Sheet C-63 for Lateral Fiber Splice Typical Details.
3. Match Existing Splice and Terminations at Existing City of Honolulu Kamehameha/H3 Cabinet.
4. Contact Tuan Nguyen (808-625-8378) (tuan.nguyen1@charter.com) 30 Days Prior to Any Interruption of Existing Spectrum Cable Fiber Connections.



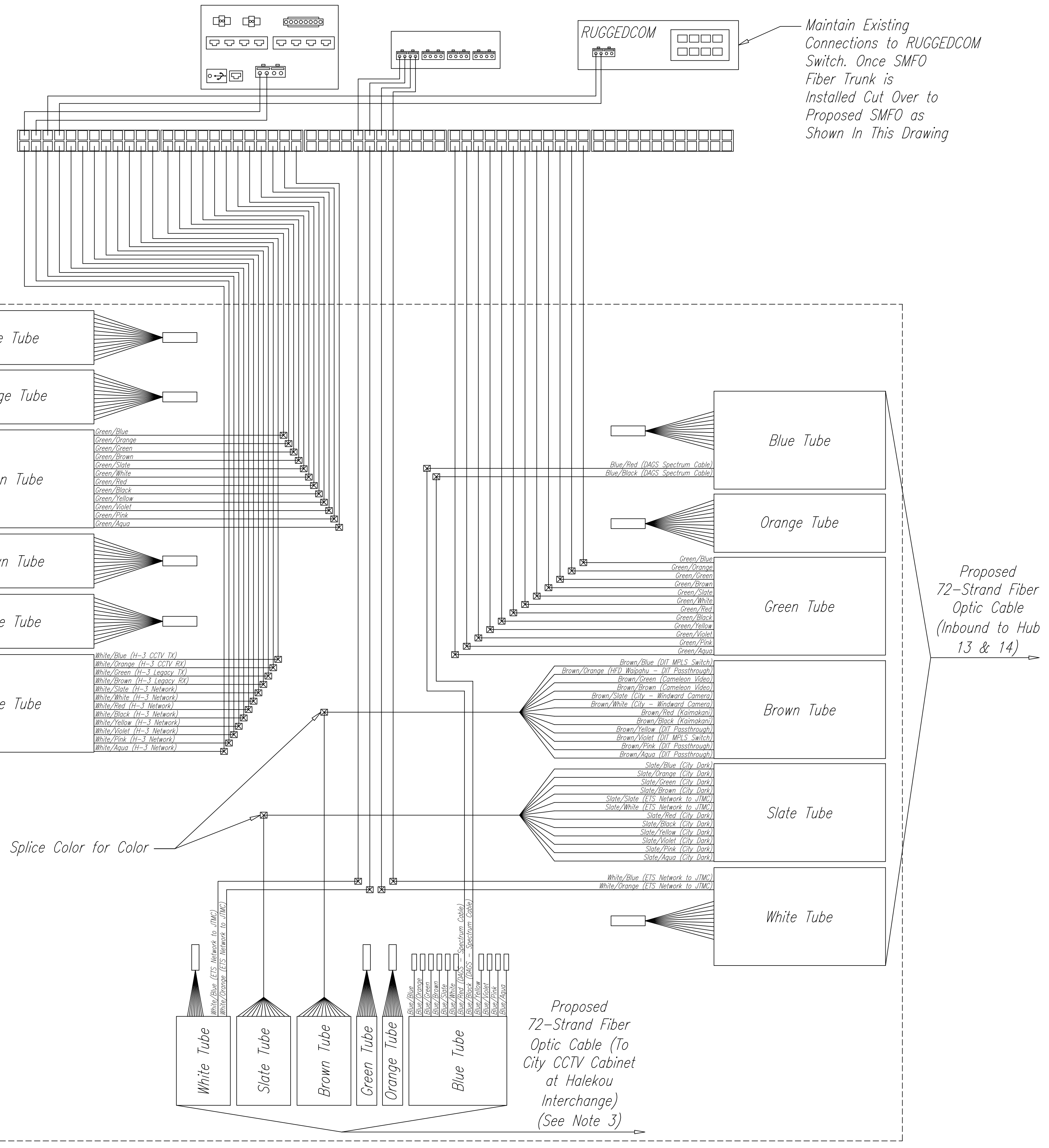
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 HIGHWAYS DIVISION

ITS
HUB 8 SPLICE DETAIL

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. C-61 OF 111 SHEETS



Maintain Existing Connections to RUGGEDCOM Switch. Once SMFO Fiber Trunk is Installed Cut Over to Proposed SMFO as Shown In This Drawing

Proposed 72-Strand Fiber Optic Cable (Outbound to Hub 13 & 14)

Proposed 72-Strand Fiber Optic Cable (Inbound to Hub 13 & 14)

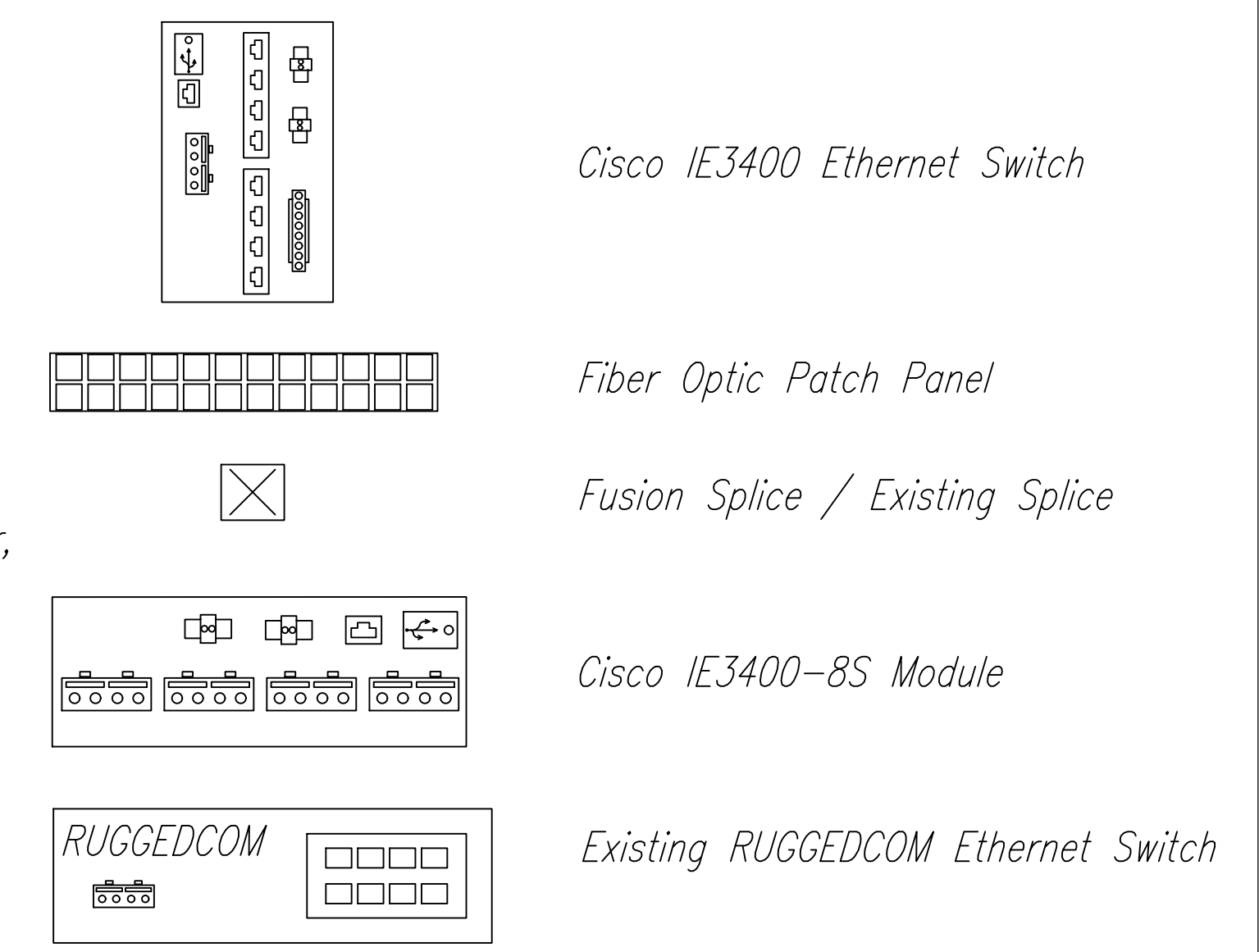
Splice Color for Color

Proposed 72-Strand Fiber Optic Cable (To City CCTV Cabinet at Halekou Interchange) (See Note 3)

ORIGINAL PLAN	DATE
NO. _____	_____
SURVEY PLOTTED BY _____	DESIGNED BY _____
DRAWN BY _____	QUANTITIES BY _____
TRACED BY _____	CHECKED BY _____

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	79	111

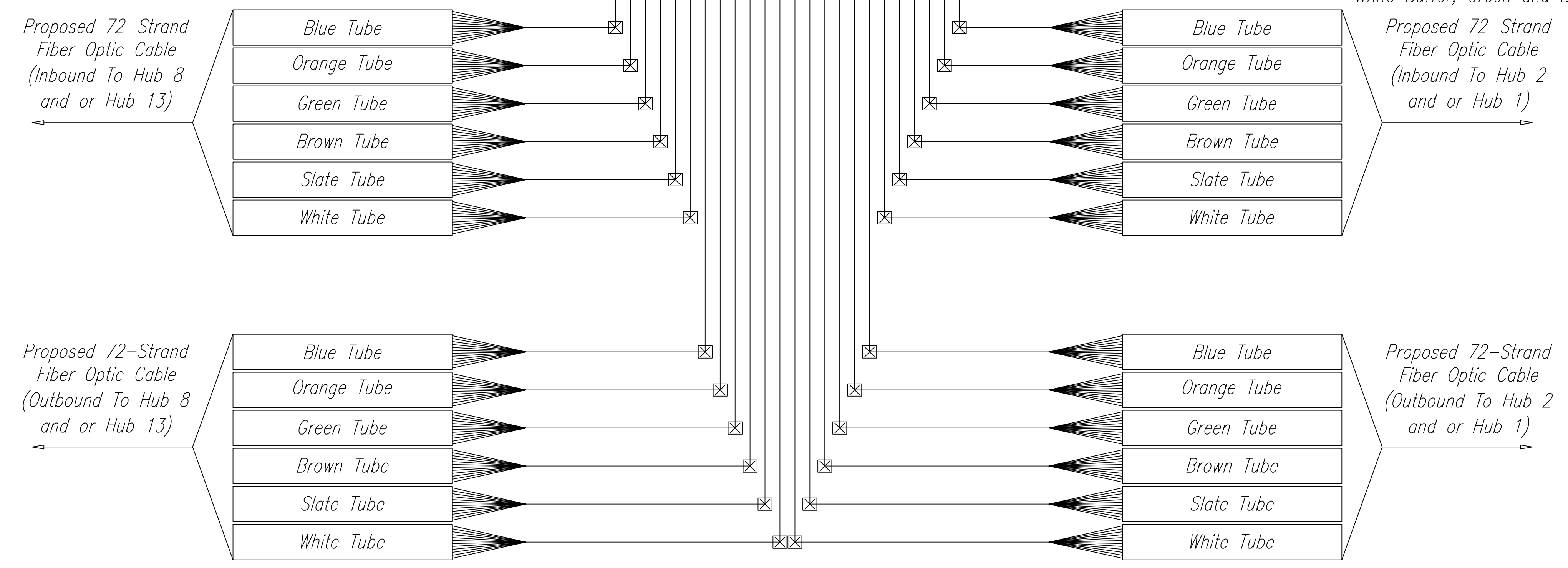
LEGEND



Maintain Existing Connections to RUGGEDCOM Switch. Once SMFO Fiber Trunk is Installed Cut Over to Proposed SMFO as Shown In This Drawing

To Outbound Side, Toward Hub 2 and 1, White Buffer, Blue and Orange Fibers
 To Outbound Side, Toward Hubs 8 and 13, White Buffer, Blue and Orange Fibers
 To Inbound Side, Toward Hubs 2 and 1, White Buffer, Blue and Orange Fibers
 To Inbound Side, Toward Hubs 8 and 13, White Buffer, Blue and Orange Fibers
 To Outbound Side, Toward Hubs 8 and 13, White Buffer, Red and Black Fibers
 To Inbound Side, Toward Hubs 2 and 1, White Buffer, Red and Black Fibers
 To Outbound Side, Toward Hubs 8 and 13, White Buffer, Red and Black Fibers
 To Inbound Side, Toward Hubs 2 and 1, White Buffer, Red and Black Fibers
 To Inbound Side, Toward Hubs 8 and 13, White Buffer, Green and Brown Fibers
 To Inbound Side, Toward Hubs 1 and 2, White Buffer, Green and Brown Fibers
 To Outbound Side, Toward Hubs 8 and 13, White Buffer, Green and Brown Fibers

See Note 2



NOTES:

1. All Splices Shall be Fusion Splices. Unless Otherwise Indicated. Terminate and Patch Through All Un-Allocated Fibers for Future Use.
2. Terminate All SMFO Trunk Fibers in TOC Fiber Optic Cabinet.
3. Multimode and 12 Strand Lateral Fiber Splices Omitted for Clarity. Refer to Details on Sheets C-60 for Typical Hub Splice and C-63 for 12 Strand Lateral Fiber Splice Details.
4. Match Existing Fiber Optic Patch and Terminations from Existing Green and Brown Buffer Tubes to Maintain Existing DIT and Cameleon Connections.

DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
TRACED BY	_____
DESIGNED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____
No.	_____



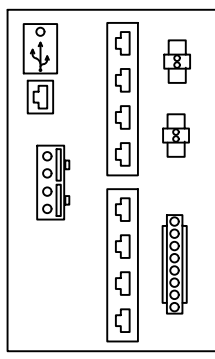
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STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
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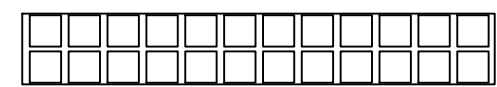
HUB 14 SPLICE DETAIL

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

LEGEND



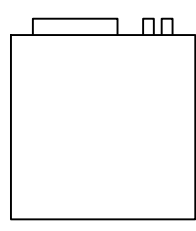
Cisco IE3400 Ethernet Switch



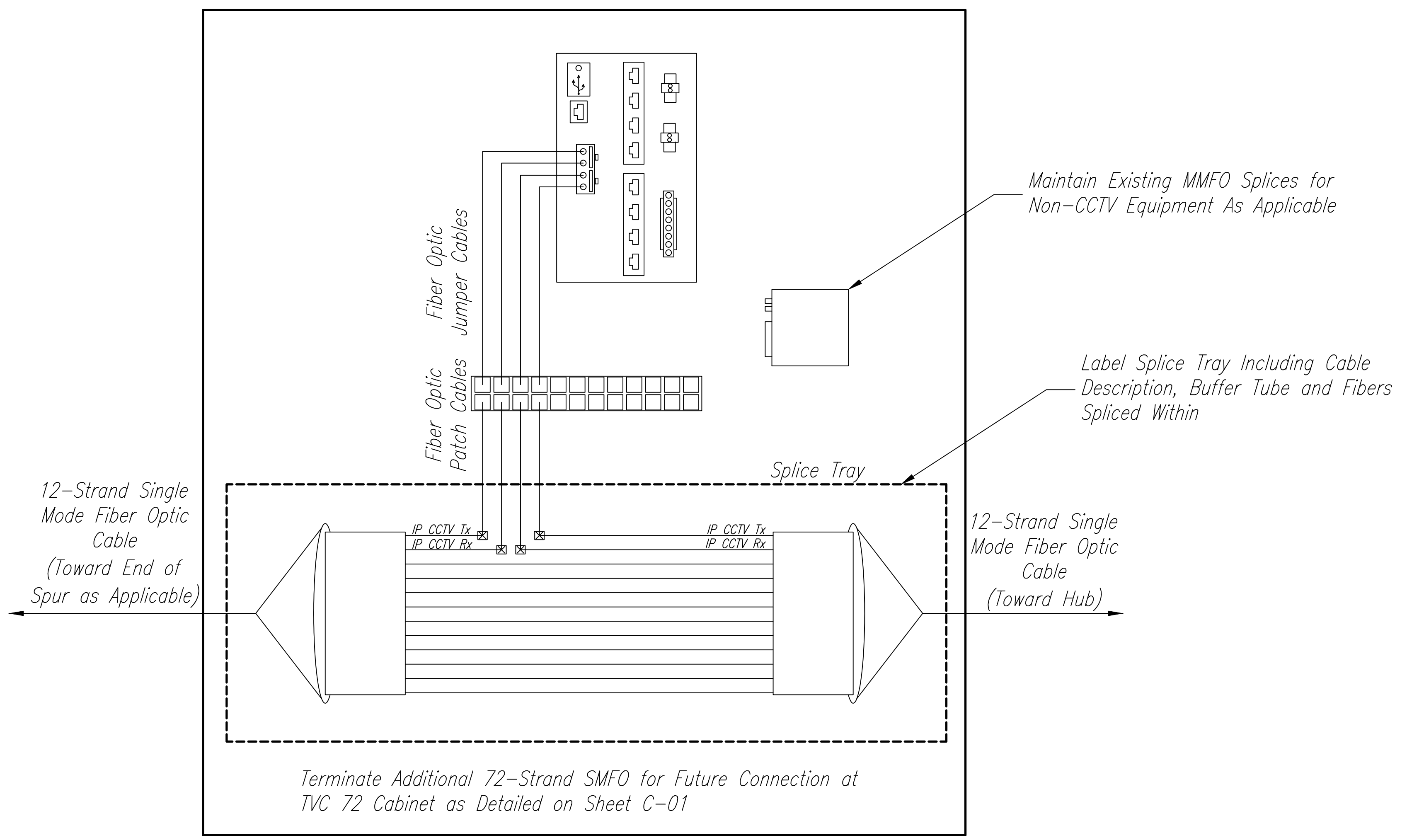
Fiber Optic Patch Panel



Fusion Splice



Existing Serial Modem



Detail 1 Typical CCTV Cabinet Splice Detail
NTS

C-01	C-06	C-17	C-38
C-02	C-07	C-27	C-40
C-03	C-08	C-32	C-41
C-04	C-12	C-34	C-42
C-05	C-16	C-37	

ORIGINAL PLAN	DATE
REVISION	DATE
DESIGNED BY	
CHECKED BY	
DATE	

NOTES:

- All Splices Shall be Fusion Splices. Unless Otherwise Indicated, Terminate and Patch Through All Un-Allocated Fibers for Future Use.
- Single-Mode Trunk Splices Omitted for Clarity at Hub Locations Where Applicable. Refer to Details on Sheets C-58 to C-62 for Single-Mode Splice Typical Details at Hub Cabinets.



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 EXPIRATION DATE OF LICENSE

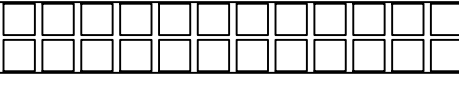
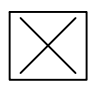
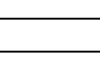
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

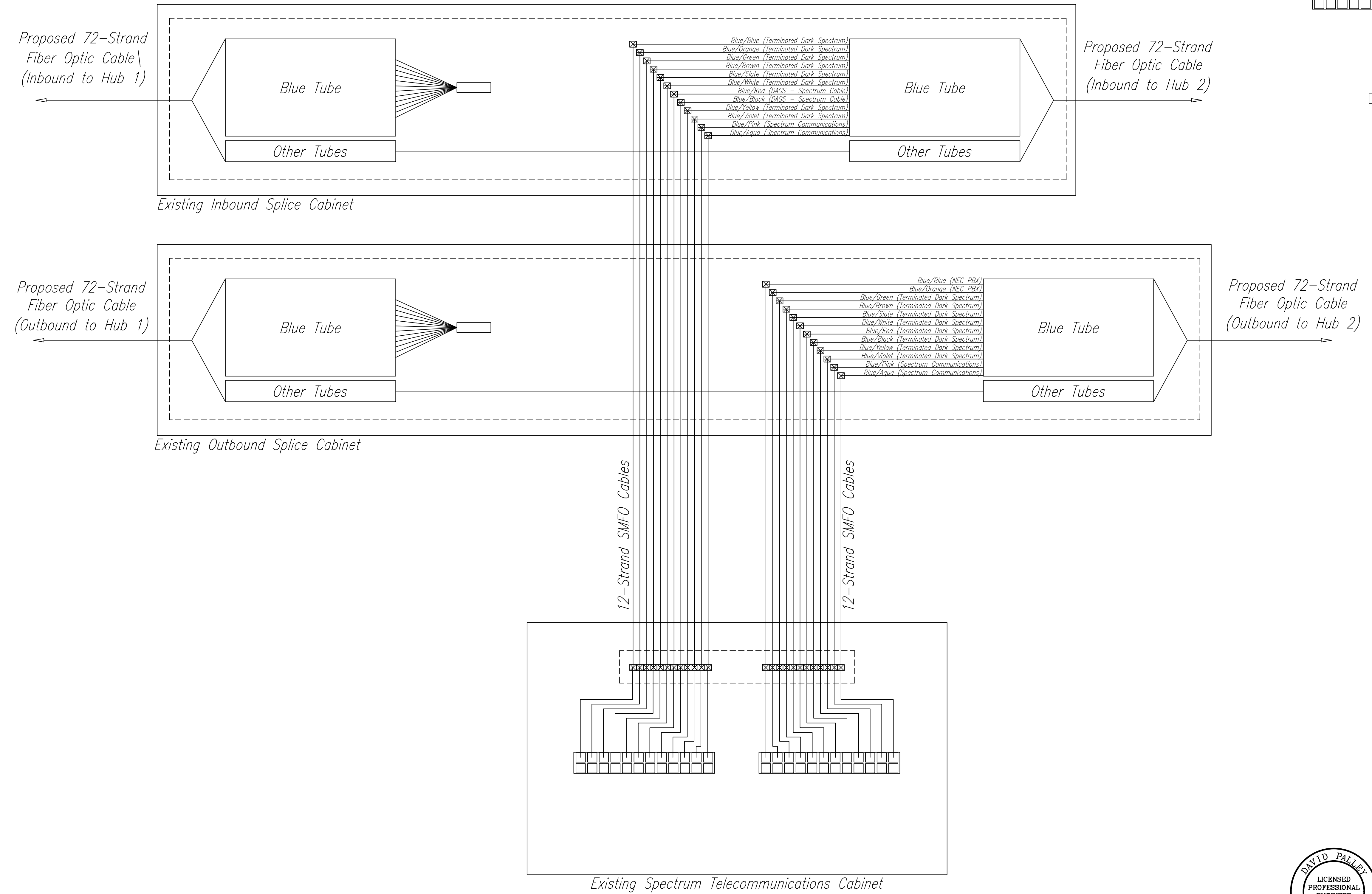
ITS
 TYPICAL DEVICE CABINET SPLICE DETAILS

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	81	111

LEGEND

-  Fiber Optic Patch Panel
-  Fusion Splice / Existing Splice
-  Cap, Bundle, and Secure Underminated and Unspliced Fibers



NOTES:

1. All Splices Shall be Fusion Splices. Unless Otherwise Indicated, Terminate and Patch Through All Un-Allocated Fibers for Future Use.
13. Contact Tuan Nguyen (808-625-8378) (tuan.nguyen1@charter.com) 30 Days Prior to Any Interruption of Existing Spectrum Cable Fiber Connections.

ORIGINAL PLAN	DATE
REVISION	
DESIGNED BY	
CHECKED BY	
DATE	



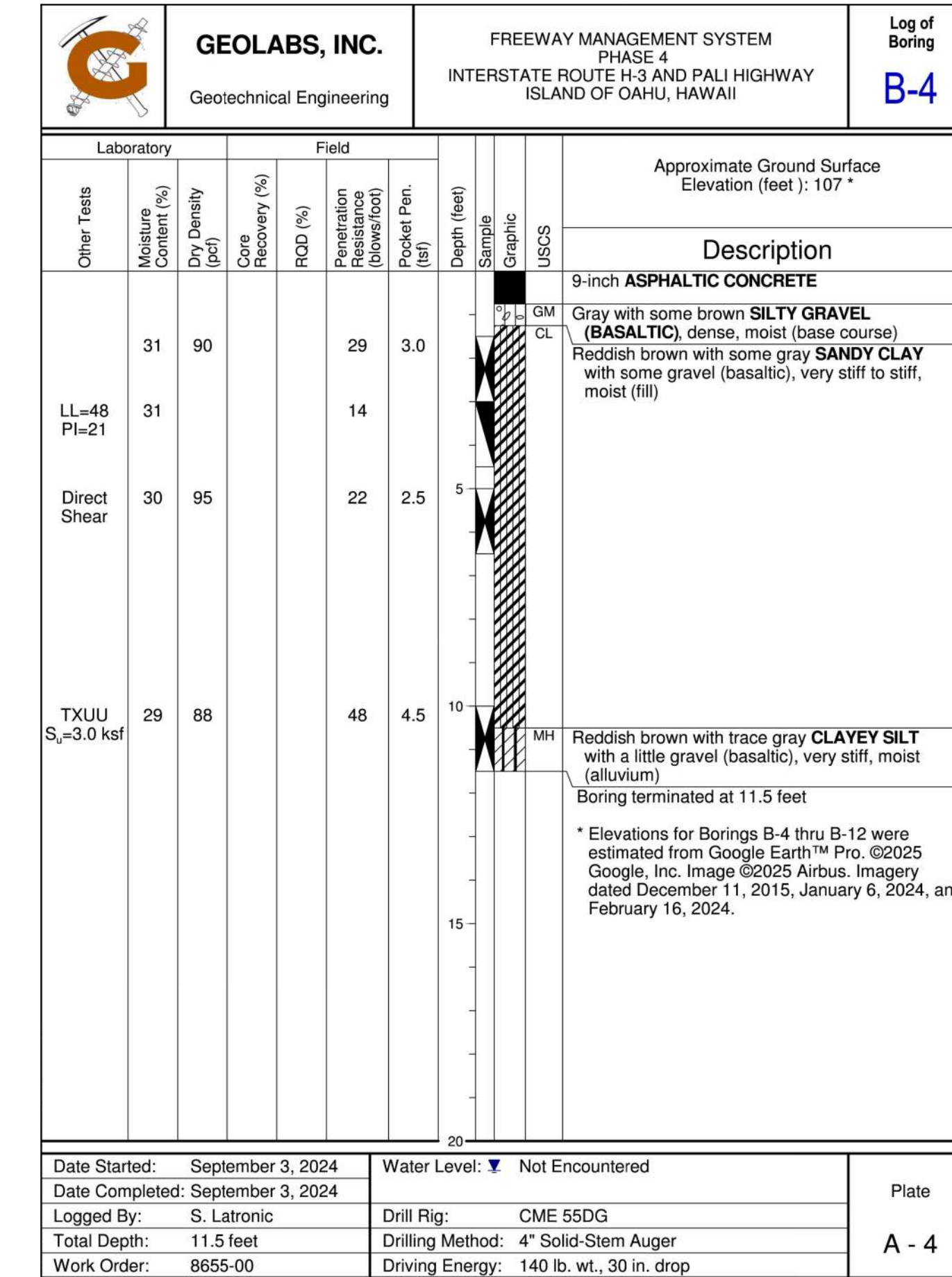
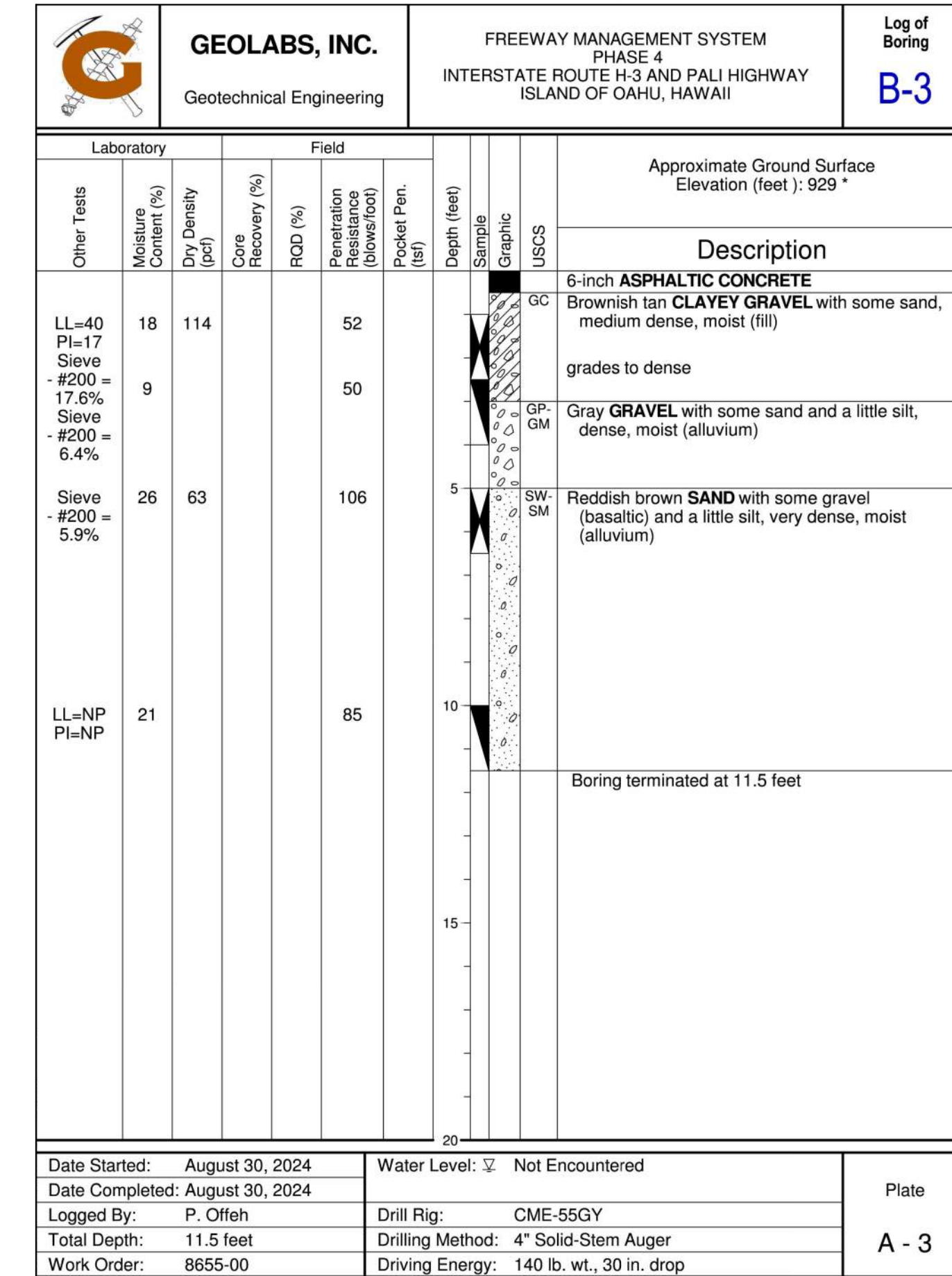
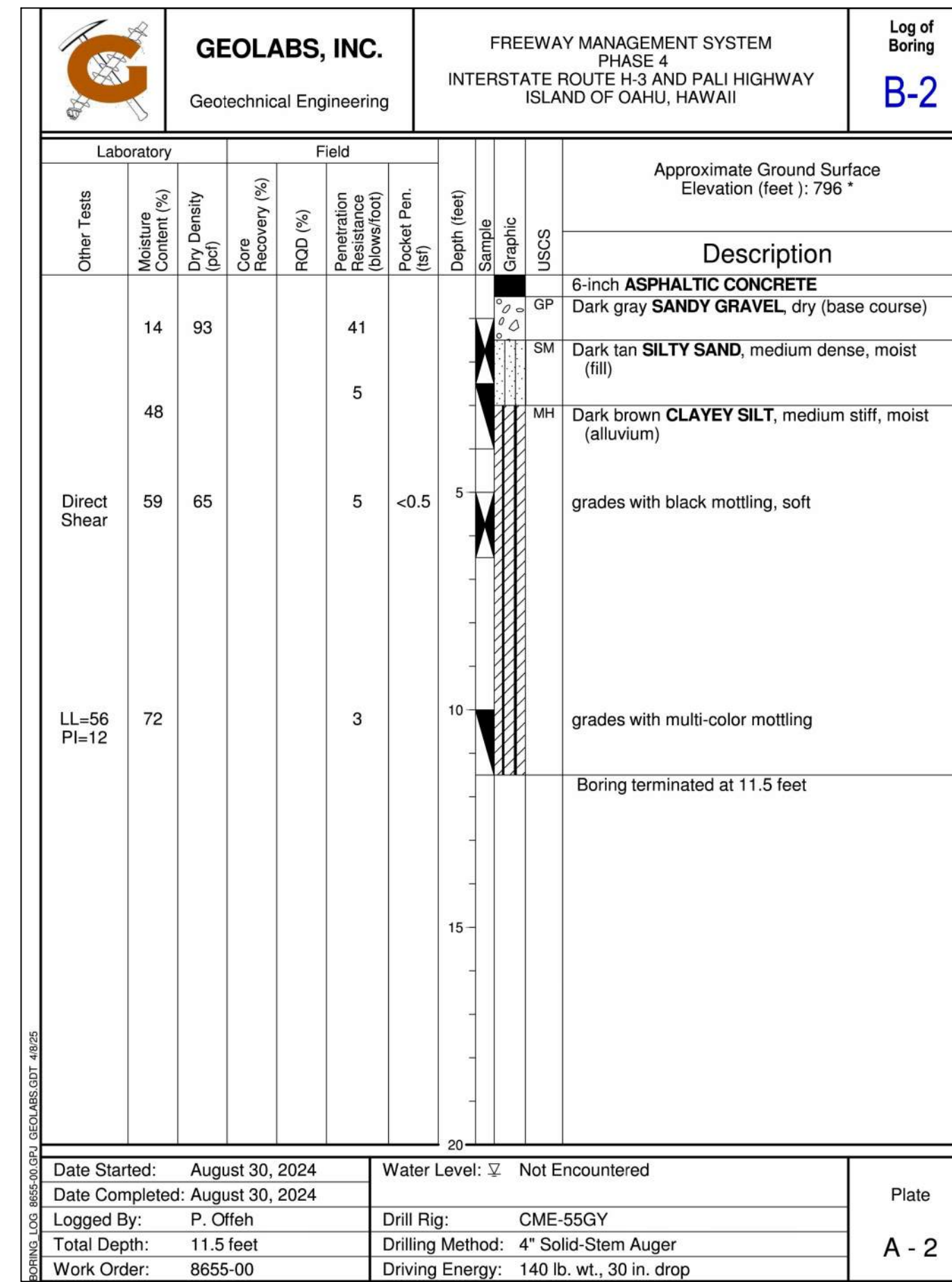
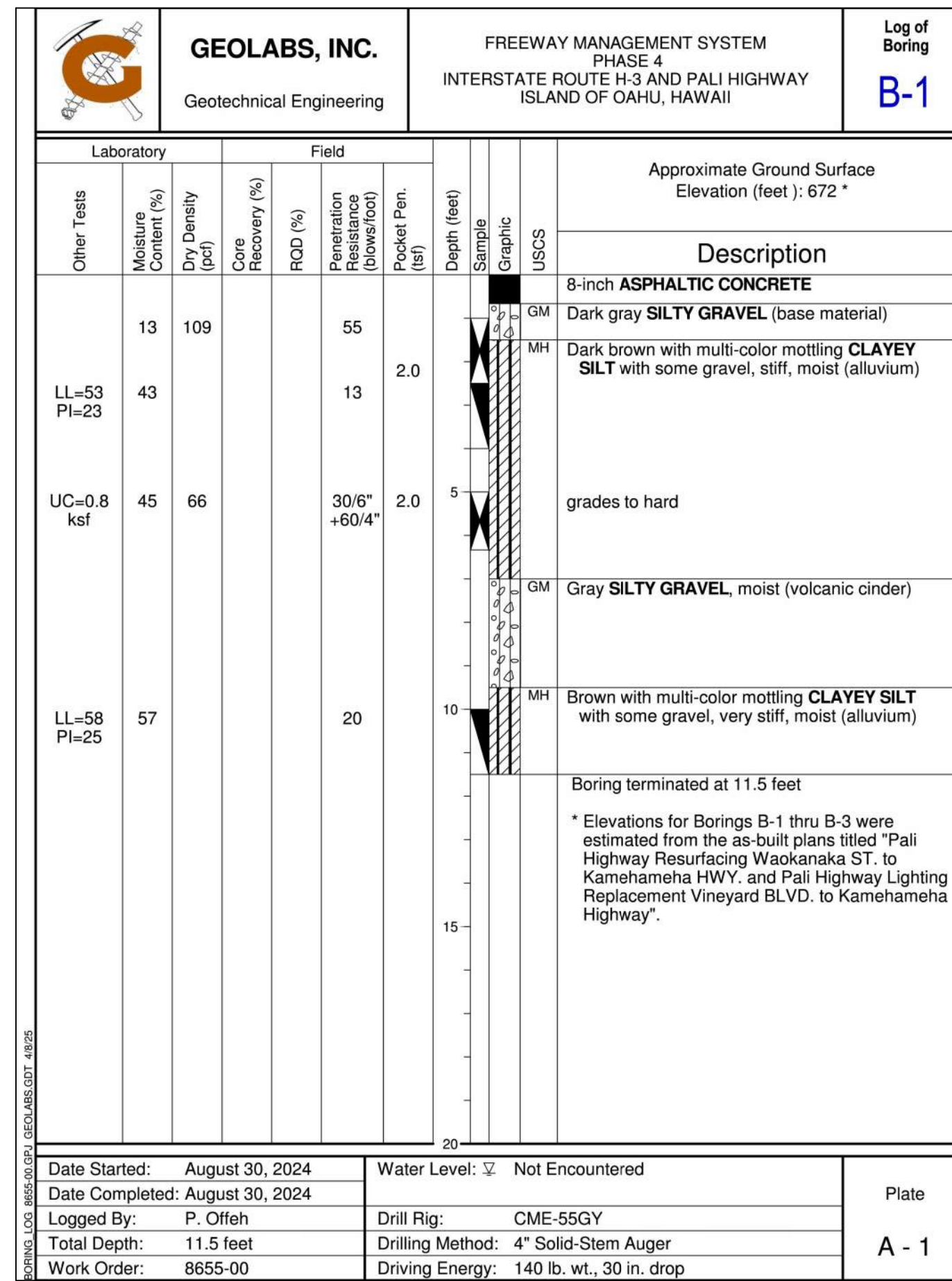
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 Signature: *David Palley*
 Date: 4/20/2028
 OF LICENSE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ITS
SPECTRUM CABLE SPLICE DETAILS

Freeway Management System, Phase 4
 Federal Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

FED. ROAD DIST. NO.	STATE	FEDERAL-AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	82	111

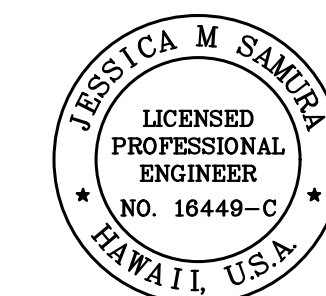


ORIGINAL PLAN
NO. _____

DATE _____

DESIGNED BY _____

CHECKED BY _____



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Jessica M. Samura
SIGNATURE

4/30/28
EXPIRATION DATE OF LICENSE

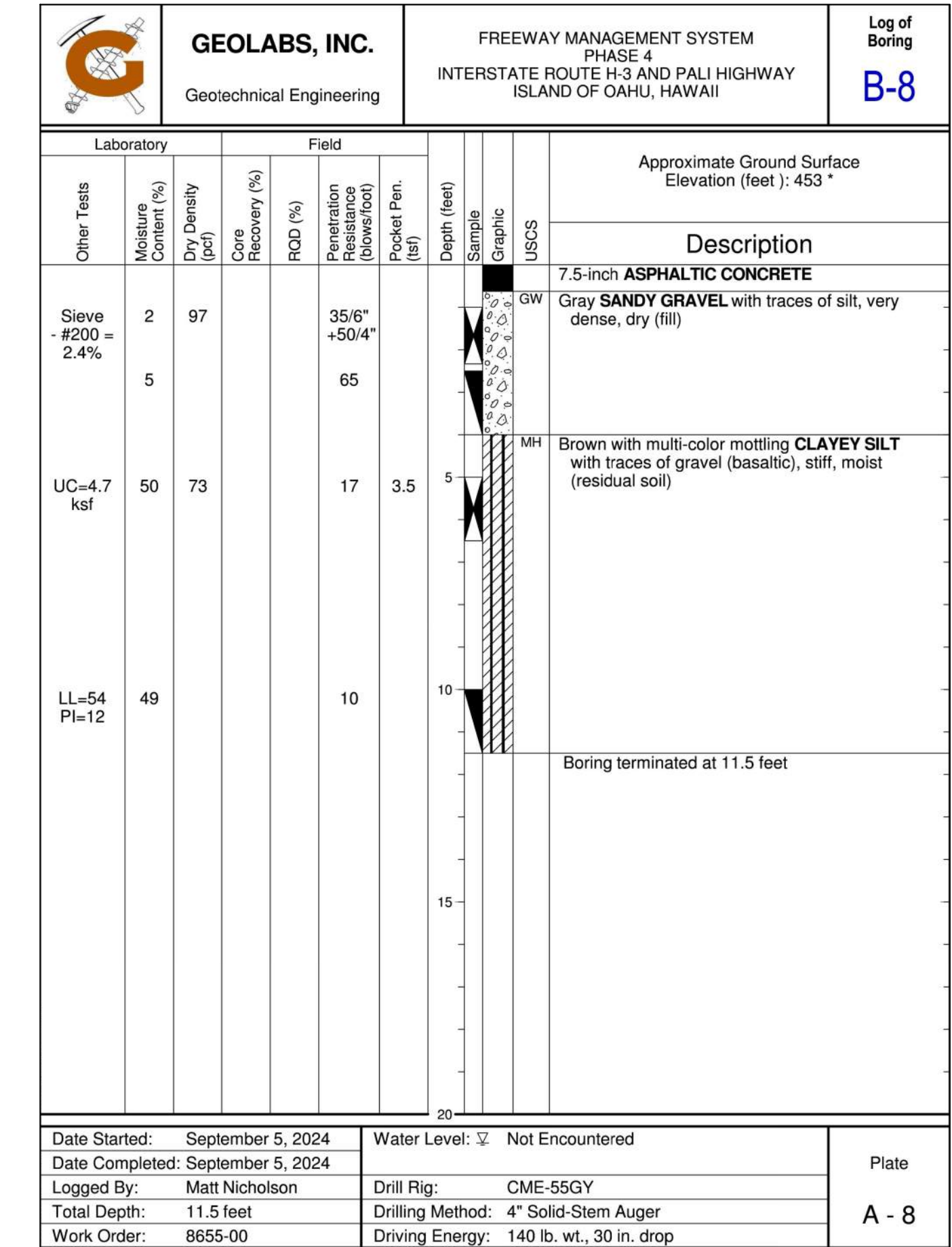
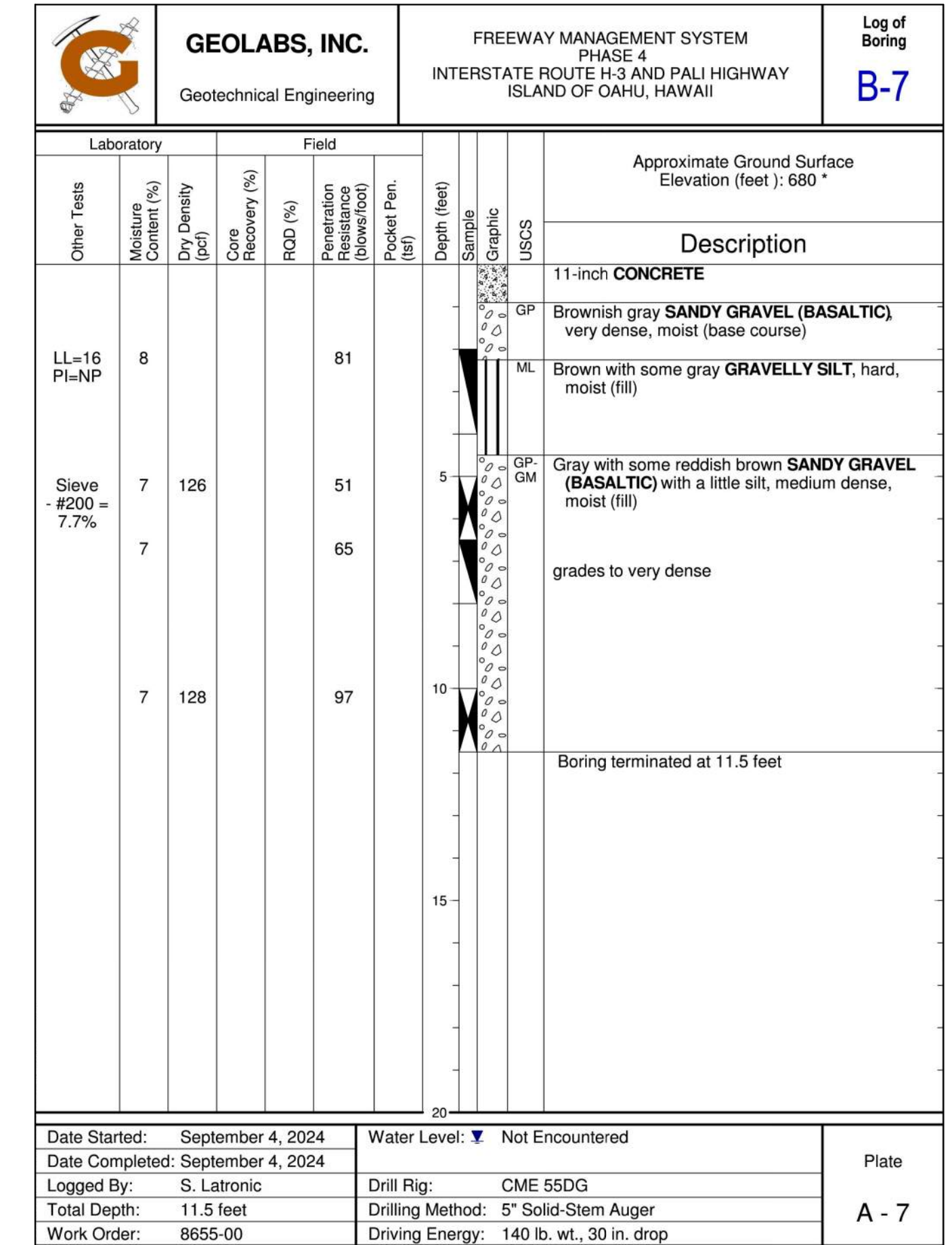
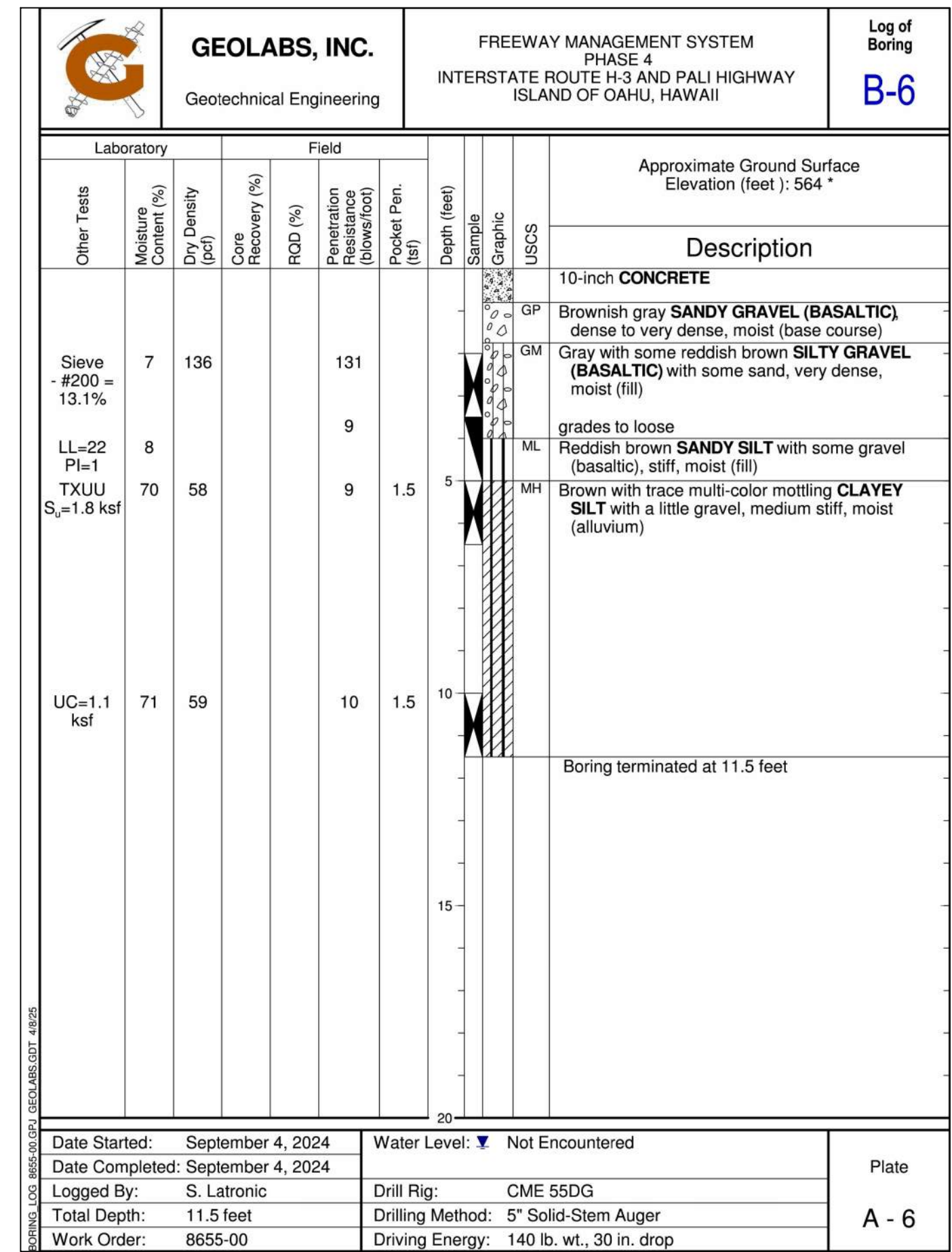
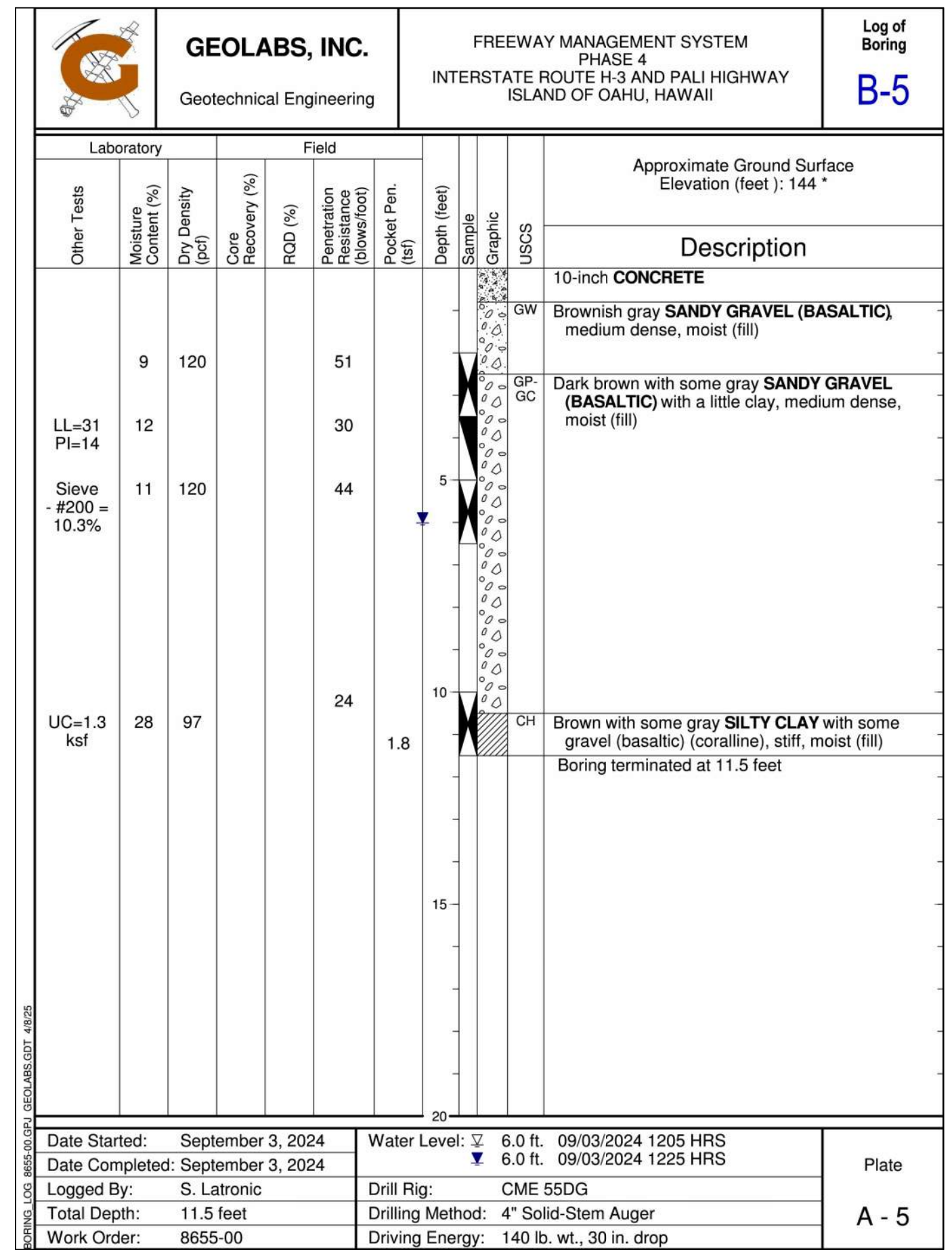
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS - 1

*Freeway Management System, Phase 4
Federal-Aid Project No. NH-0300(176)R*

Scale: As Indicated Date: April 2026

FED. ROAD DIST. NO.	STATE	FEDERAL-AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	83	111



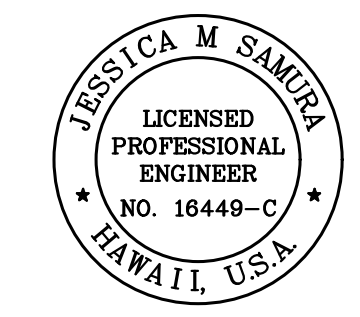
ORIGINAL PLAN
NO. _____

DATE _____

DESIGNED BY _____

CHECKED BY _____

DATE _____



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Jessica M. Samura

SIGNATURE _____

4/30/28

EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS - 2

*Freeway Management System, Phase 4
Federal-Aid Project No. NH-0300(176)R*

Scale: As Indicated Date: April 2026

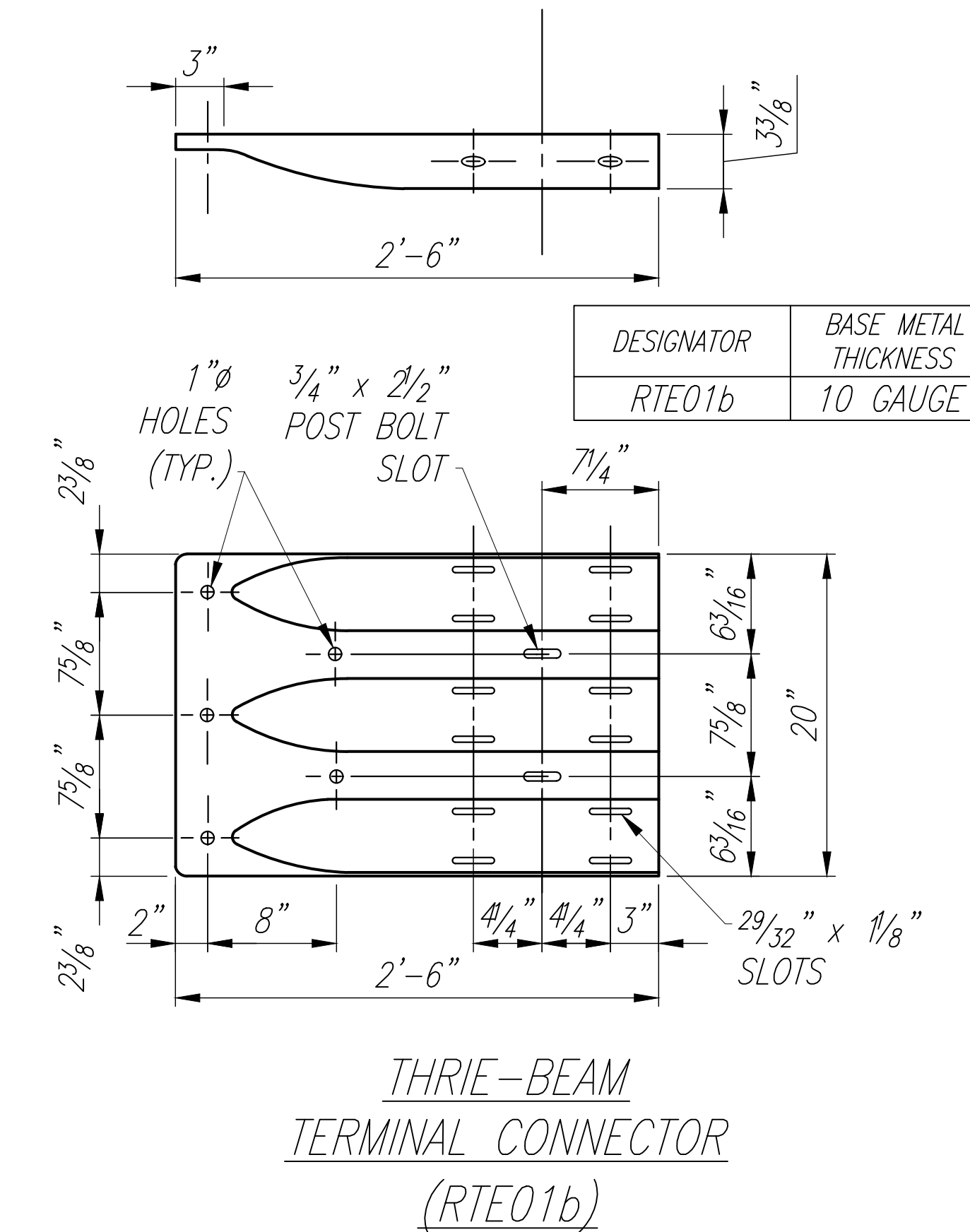
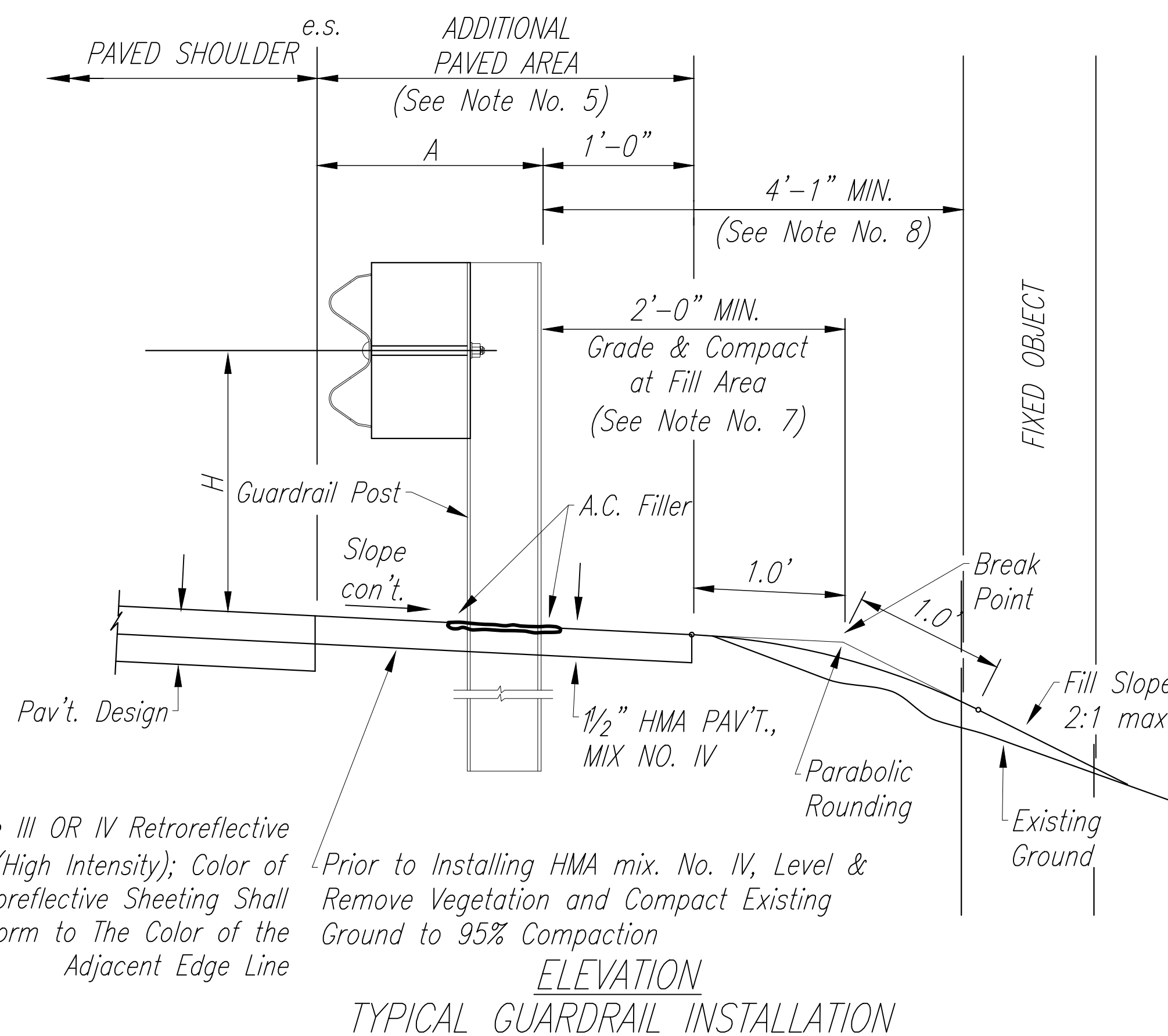
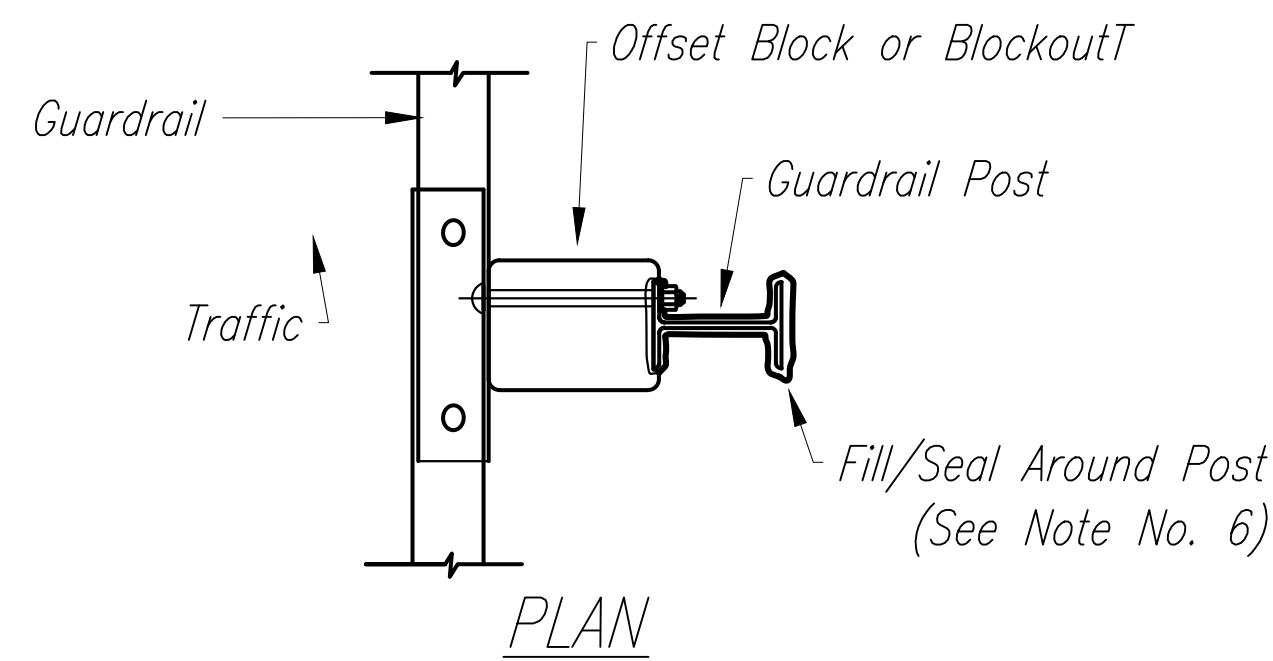
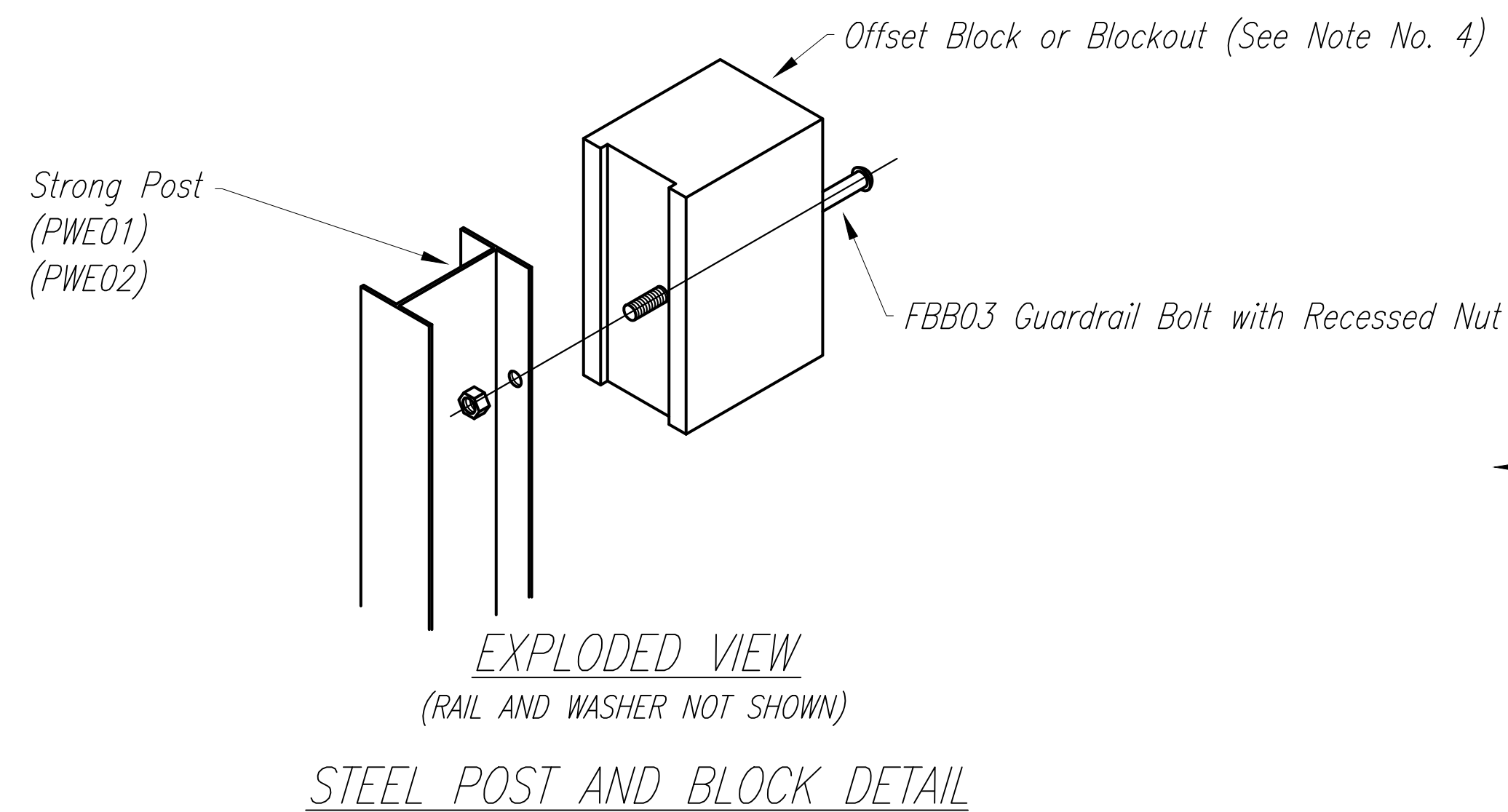
FED. ROAD DIST. NO.	STATE	FEDERAL-AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	85	111

NOTES:

- All hardware, posts and fasteners shall be hot-dip Zinc coated galvanized after fabrication. No punching, drilling or cutting will be permitted after galvanizing.
- Where conditions require, special post lengths in increments of 6 inches may be specified by the engineer.
- All fasteners, posts, and rail elements (i.e FBB03, PWE01, RWM04B, etc.) shall conform to the latest edition and amendments of "A Guide to Standardized Highway Barrier Rail Hardware", a report prepared and approved by the AASHTO-AGC-ARTBA joint cooperative committee, subcommittee on new highway materials Task Force 13 report. Dimensions of fasteners, posts and rail elements have been converted from metric units into their present form.
- The blockout of offset block shall be approved by the state.

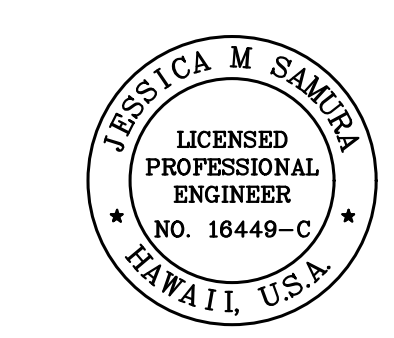
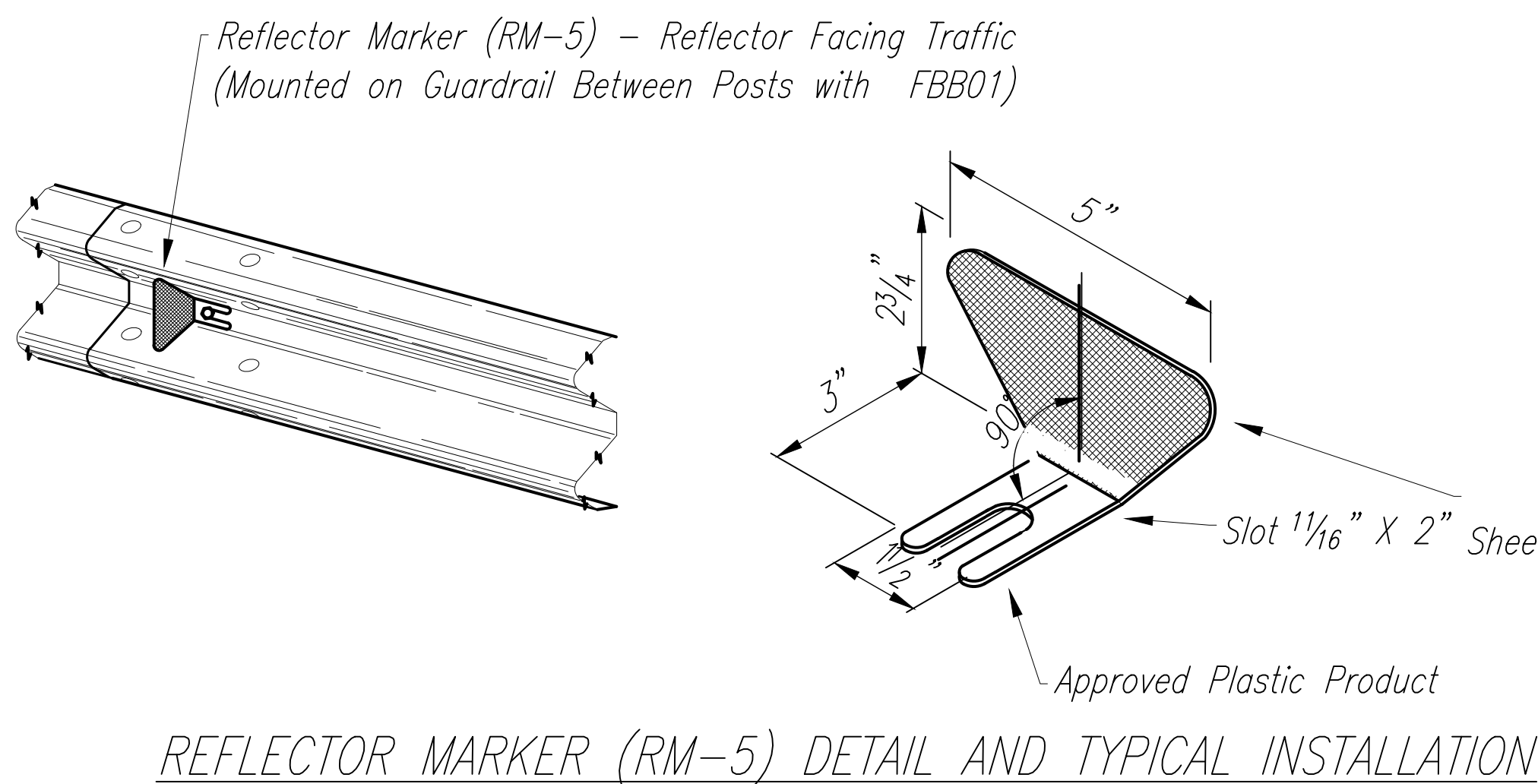
- All new guardrail systems (systems consists of total length of guardrail including both end treatments) shall include the additional paved area.
- After the guardrail posts are installed in the paved area, the contractor shall fill/seal around each guardrail posts and all cracks in the paved area caused during the guardrail posts installation. If required by the inspector/engineer, the contractor shall tamper the paved area around the guardrail post prior to filling/sealing. All costs associated with this shall not be paid for separately, but shall be considered incidental to the various guardrail items.
- When standards for the fill slope area cannot be met, a site specific, engineer approved design may be used.
- Minimum working width (clear distance) between back of MGS Post to any fixed objects is 4'-1"(49").

- New Hot Mix Asphalt (HMA) pavement at guardrails shall extend 6 feet longitudinally beyond terminal ends.
- Reflector Markers (RM-5) mounted on guardrails shall be spaced every 25 feet. RM-5'S shall not be installed on terminal sections. Furnishing and installing of each RM-5 shall be considered incidental to the guardrail system.
- Details shown on this sheet reference the HDOT Statewide Guidance for Permanent Highway Safety Hardware, Memorandum HWY-TD 17-2.0314, and is intended only for the contractor's information. Guardrails including all hardware, posts, spacing, height, etc. shall be installed per manufacturer's guidelines and details.



GUARDRAIL TYPE	DIMENSION	
	H	A
MGS W/ STANDARD 8" OFFSET BLOCK	2'-1"	1'-6"

DATE	_____
DESIGNED BY	_____
CHECKED BY	_____
NO.	_____



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 EXPIRATION DATE OF LICENSE: 4/30/28

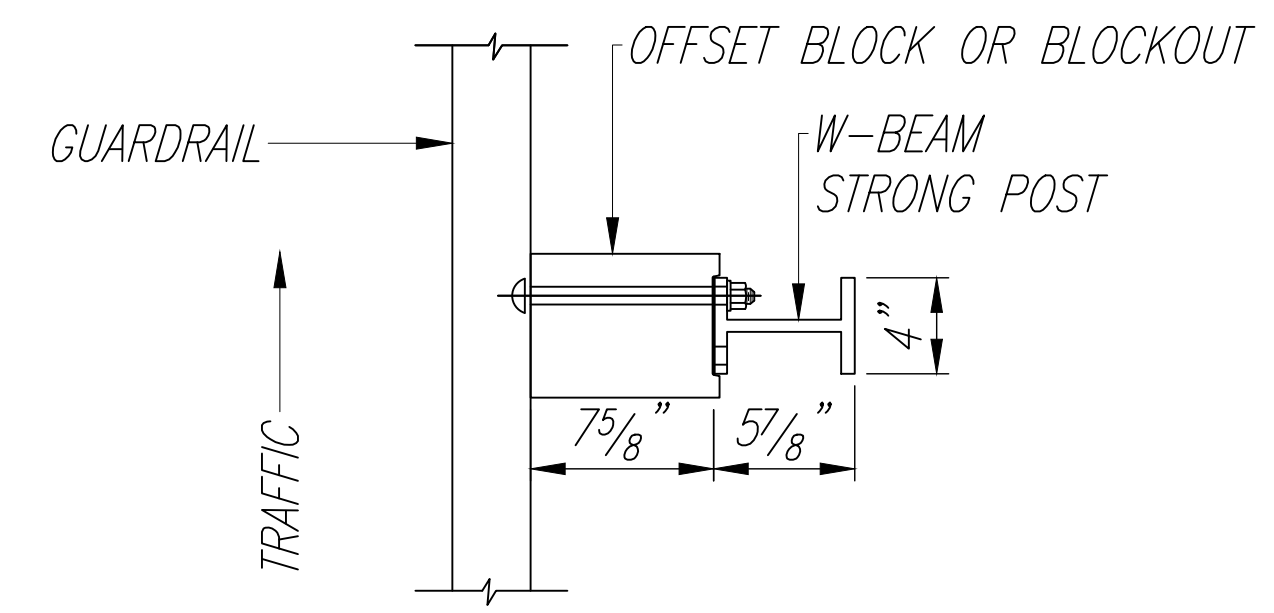
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

GUARDRAIL DETAILS

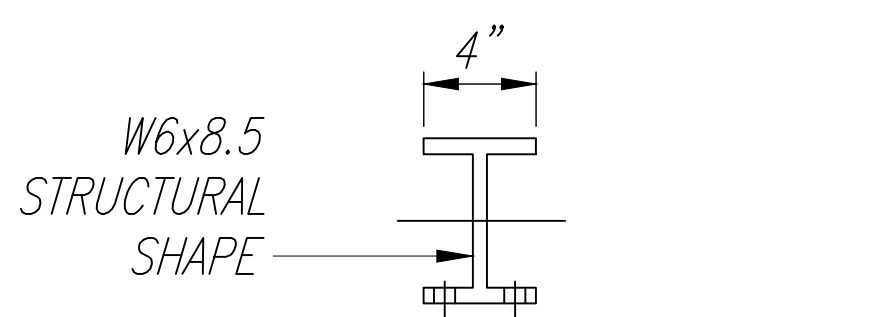
*Freeway Management System, Phase 4
 Federal-Aid Project No. NH-0300(176)R*

Scale: As Indicated Date: April 2026

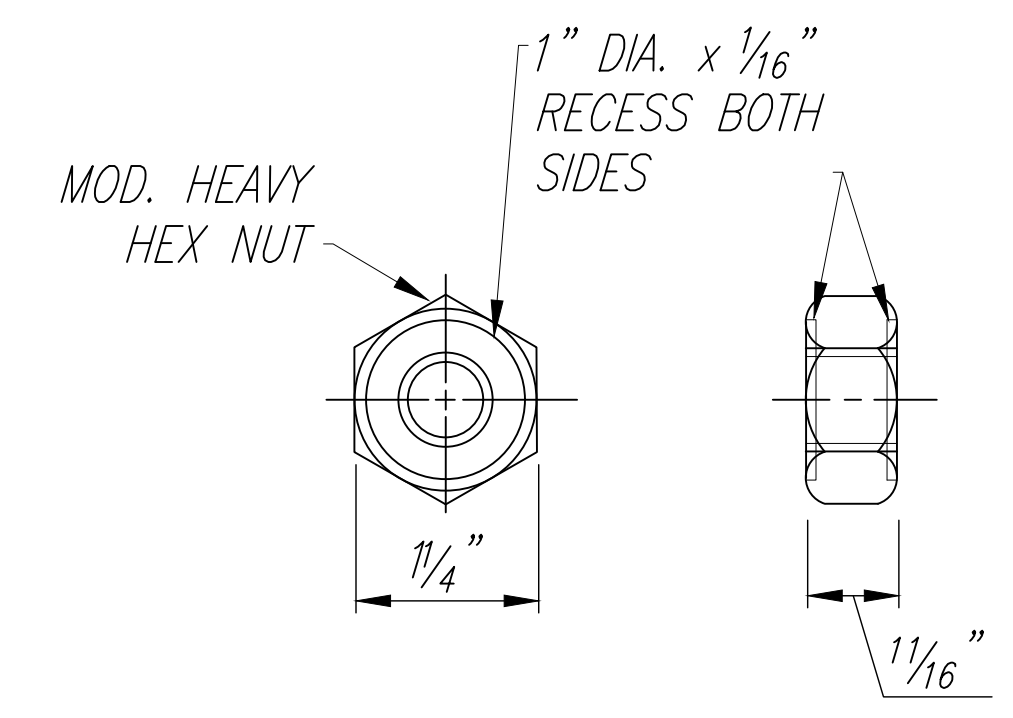
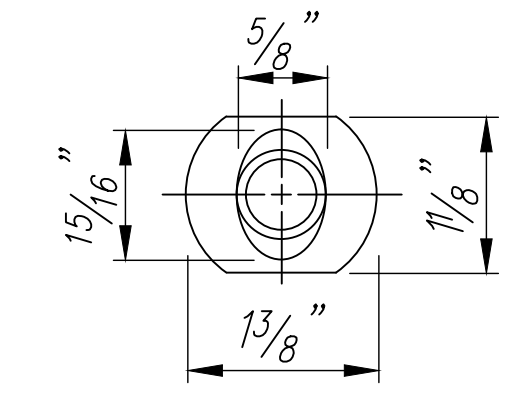
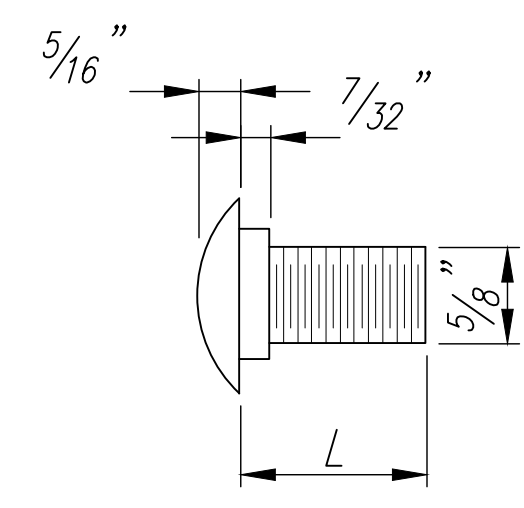
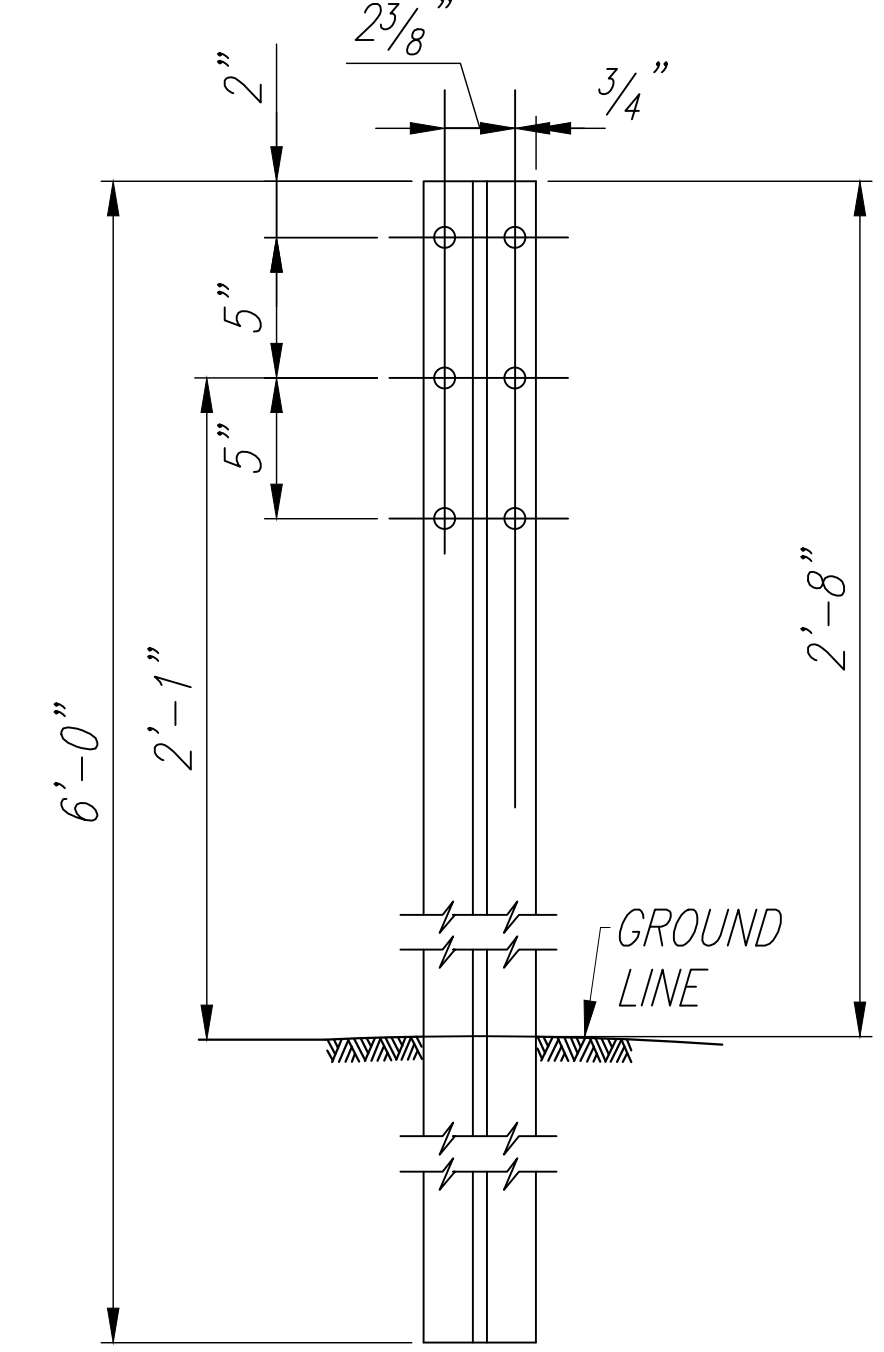
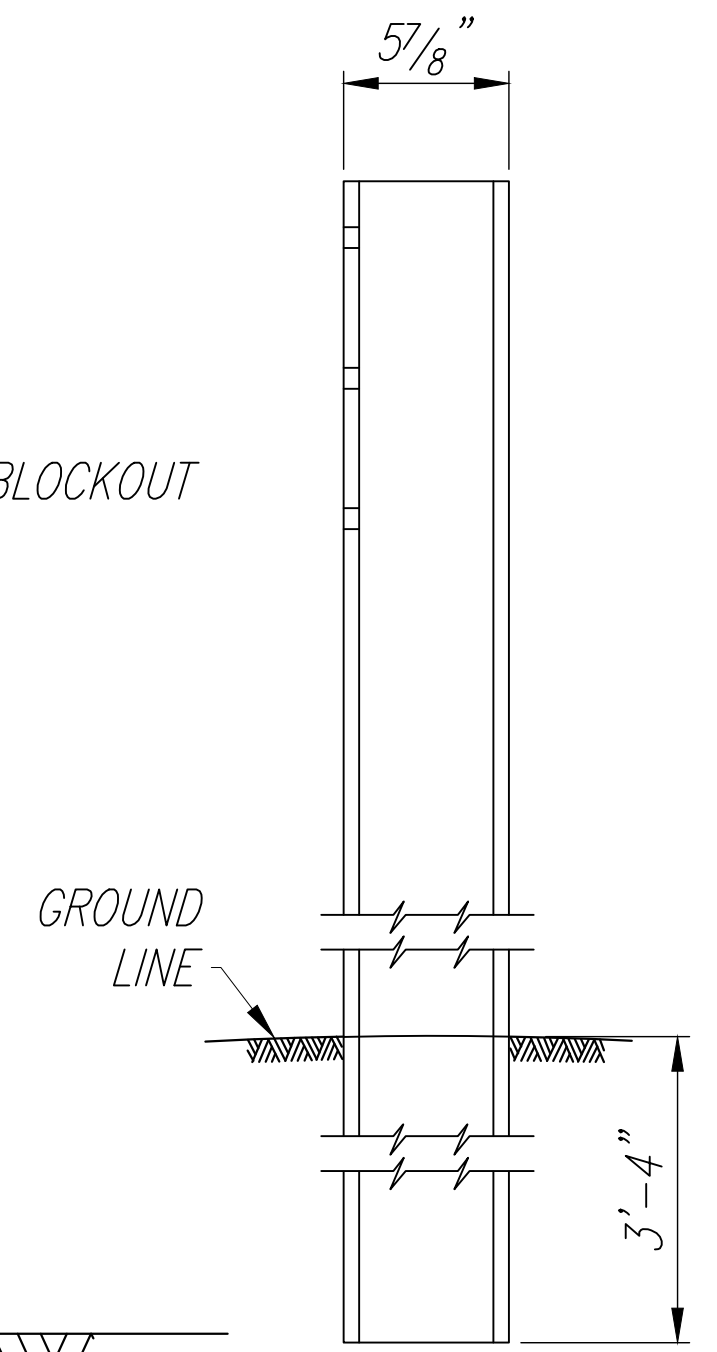
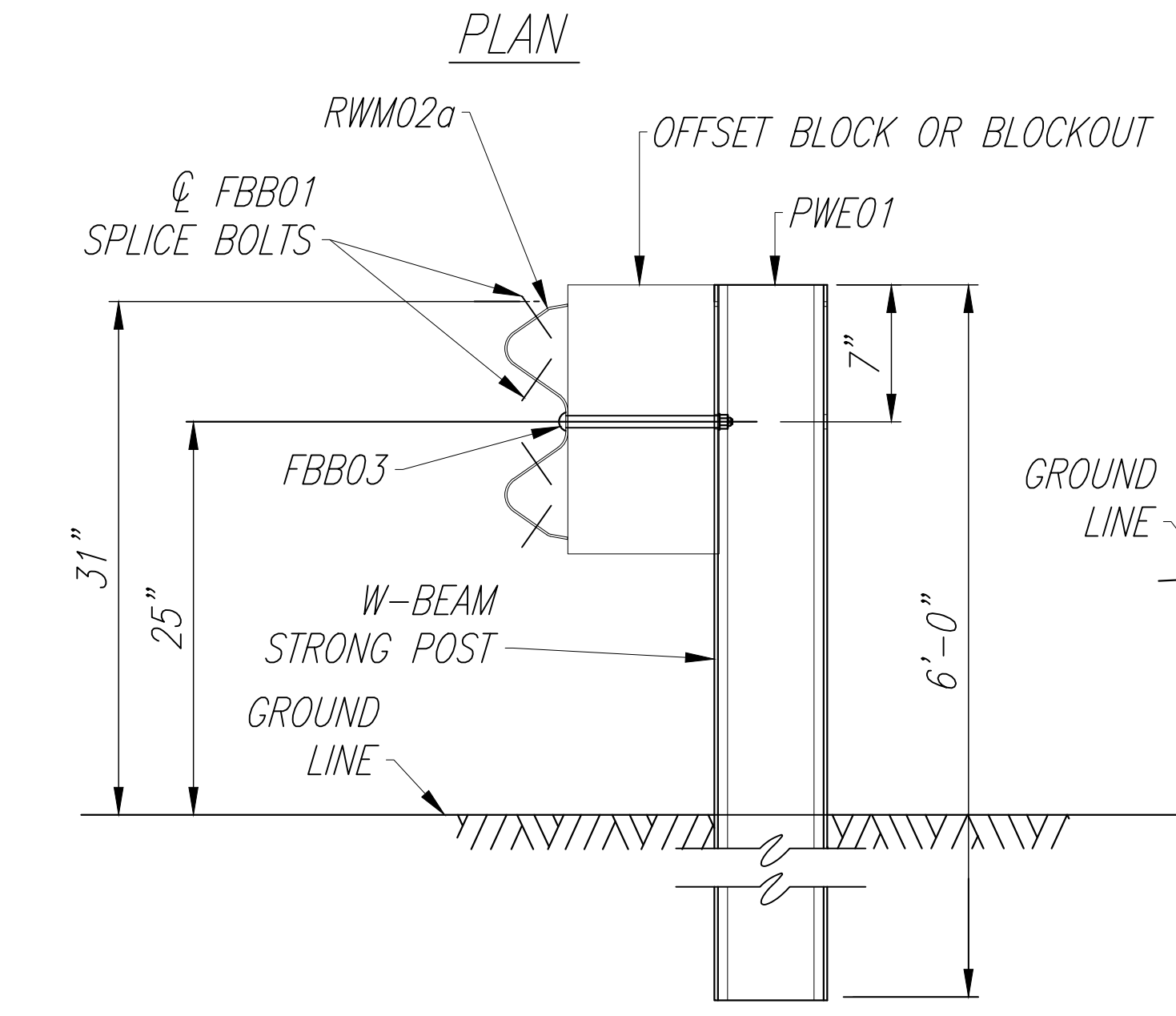
SHEET No. 1 OF 3 SHEETS



NOTE:
ALL HOLES ARE
3/4" DIA.



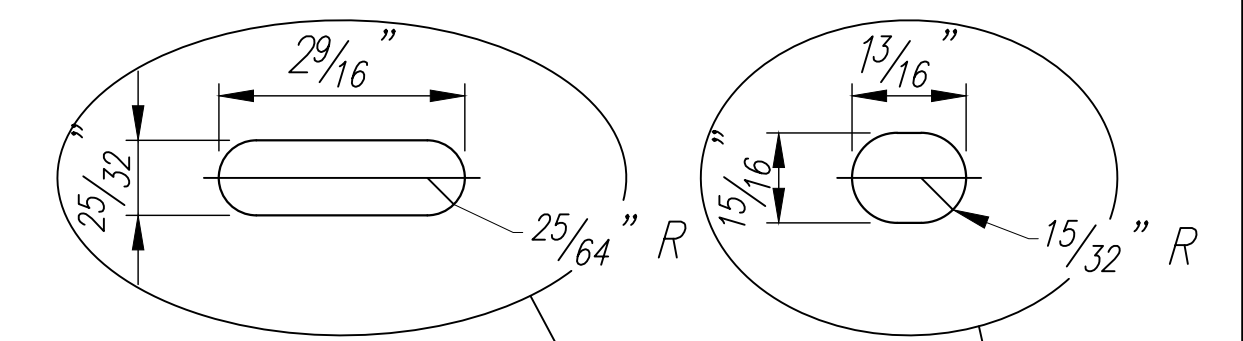
NOTE:
Details shown on this sheet reference the HDOT Statewide Guidance for Permanent Highway Safety Hardware, Memorandum HWY-TD 17-2.0314, and is intended only for the contractor's information. Guardrails including all hardware, posts, spacing, height, etc. shall be installed per manufacturer's guidelines and details.



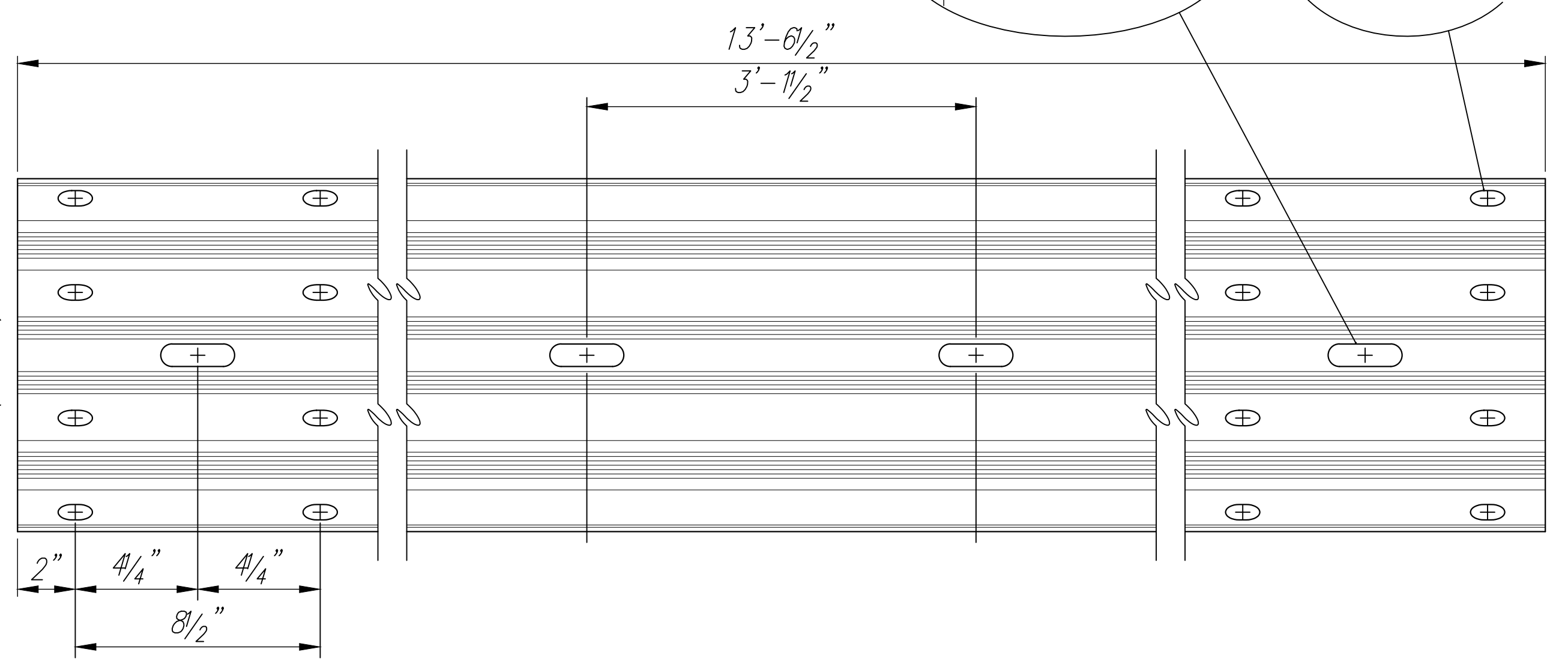
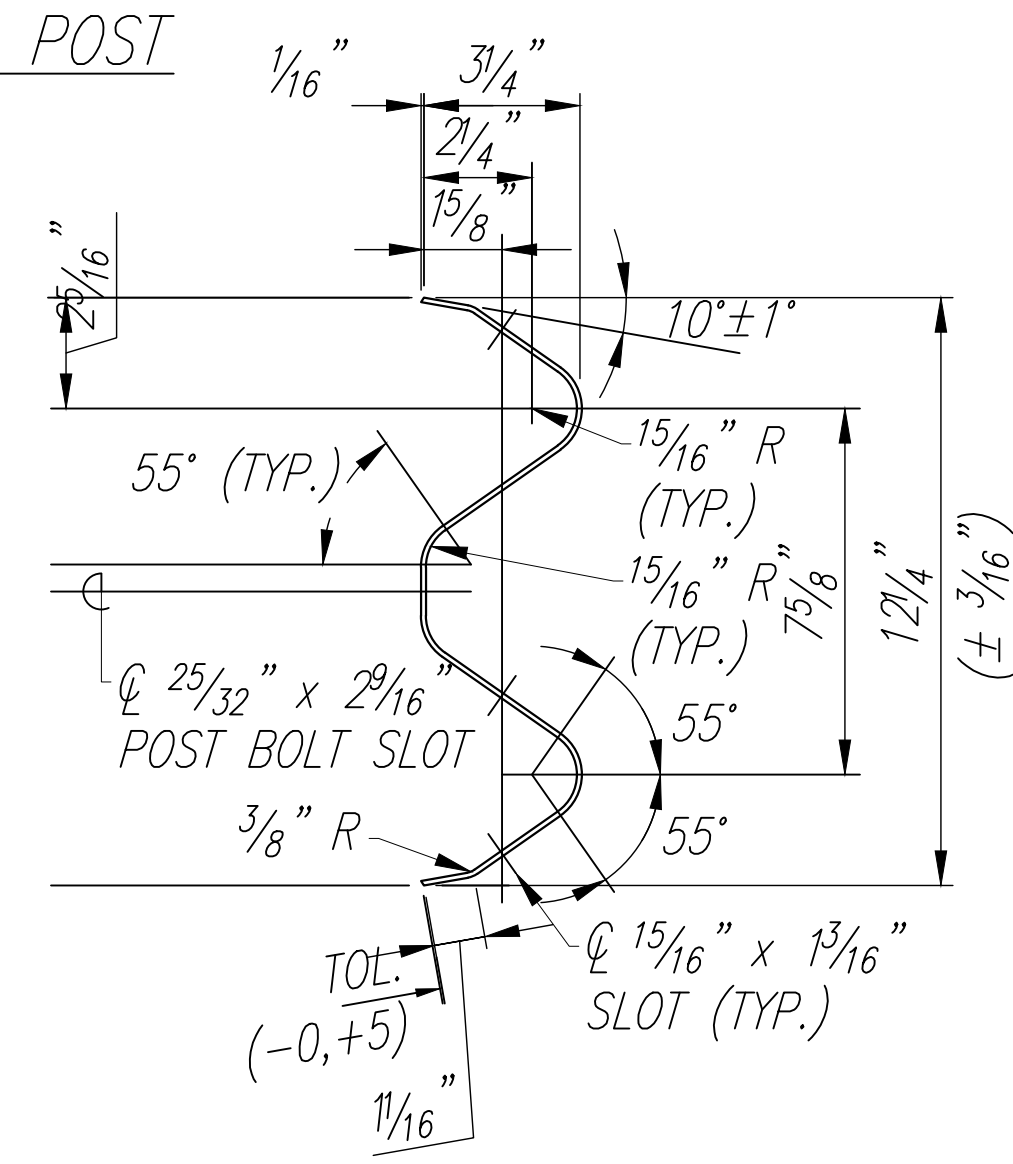
DESIGNATOR	L
FBB01	13/8"
FBB02	2"
FBB03	10"

GUARDRAIL BOLTS AND RECESSED NUT

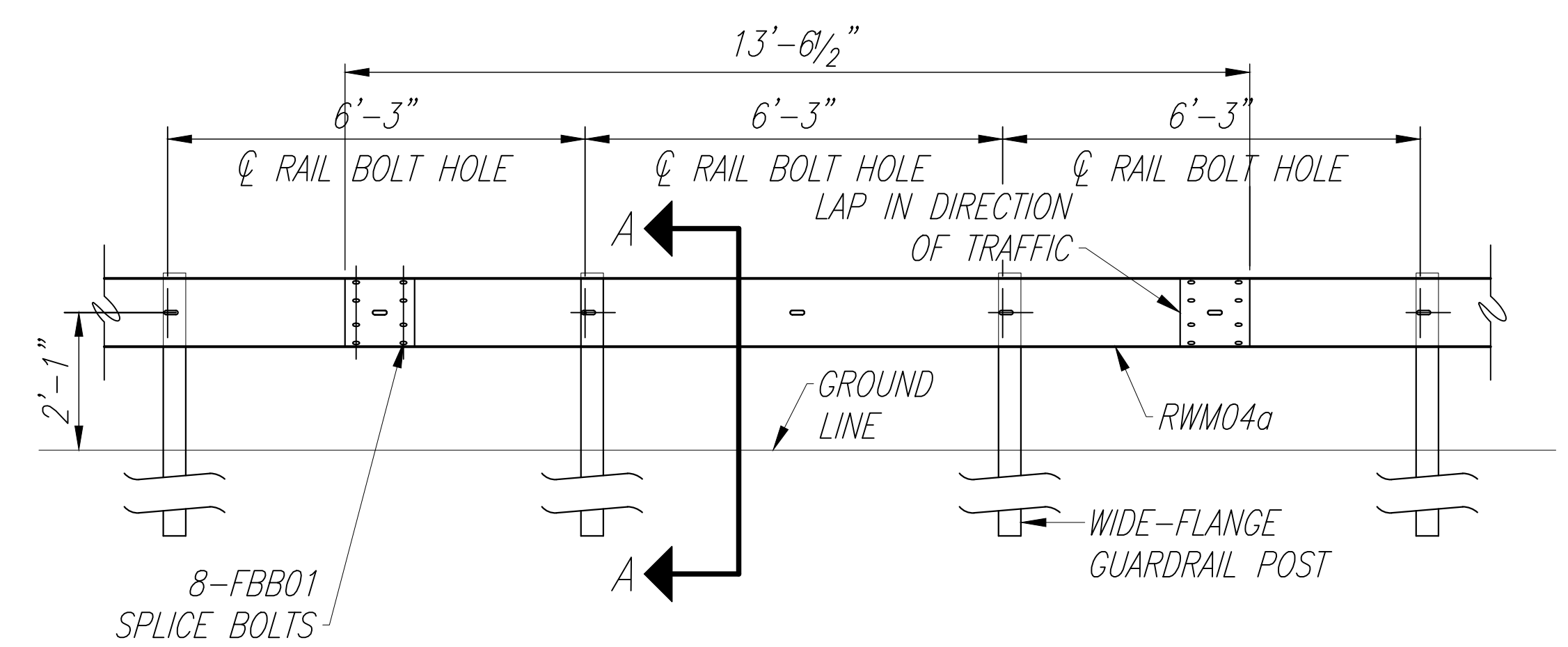
DESIGNATOR	BASE METAL THICKNESS
RWM04a	12 GAUGE



W-BEAM STRONG POST (PWE01)

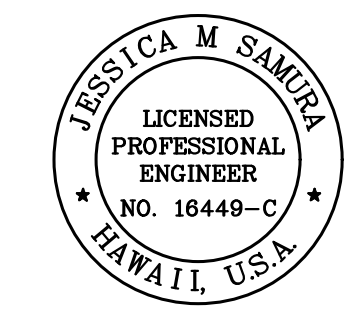


4 SPACE W-BEAM GUARDRAIL (RWM04a)



MIDWEST GUARDRAIL SYSTEM WITH
STANDARD 8" OFFSET BLOCK (SGR47)

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
QUANTITIES BY	
NO.	



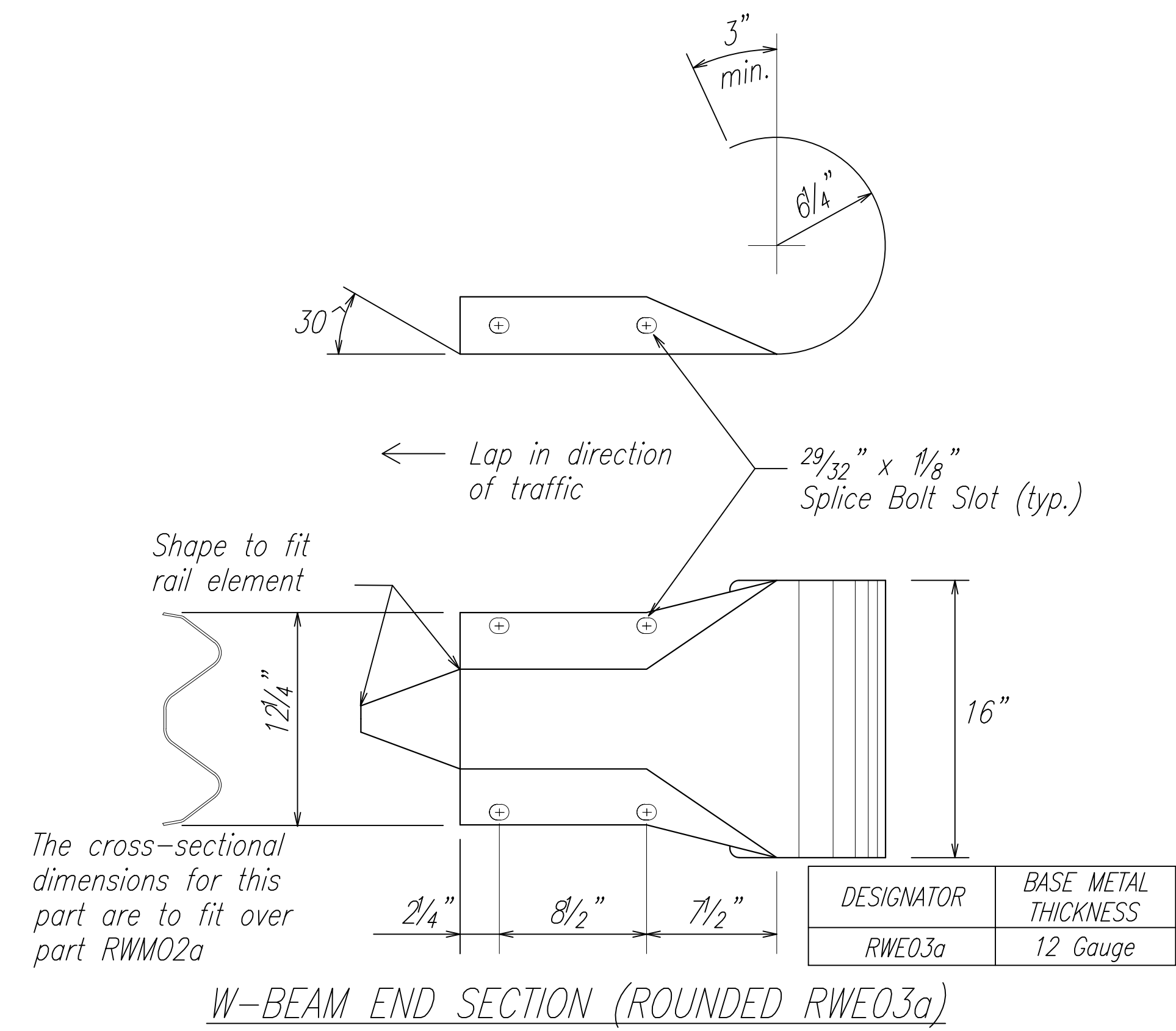
THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.
Signature: *Jessica M. Samura*
Date: 4/30/28
EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

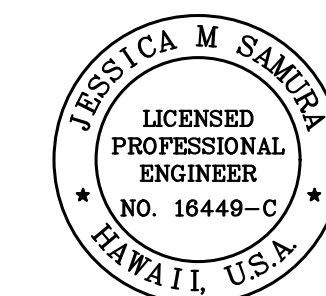
GUARDRAIL DETAILS

Freeway Management System, Phase 4
Federal-Aid Project No. NH-0300(176)R
Scale: As Indicated Date: April 2026

FED. ROAD DIST. NO.	STATE	FEDERAL-AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	87	111



ORIGINAL PLAN	DATE
NO. _____	_____
DESIGNED BY	DATE
CHECKED BY	_____
QUANTITIES BY	_____
TRACED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
CHECKED BY	_____
QUANTITIES BY	_____
TRACED BY	_____
DRAWN BY	_____



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Jessica M. Samura

SIGNATURE

4/30/28

EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

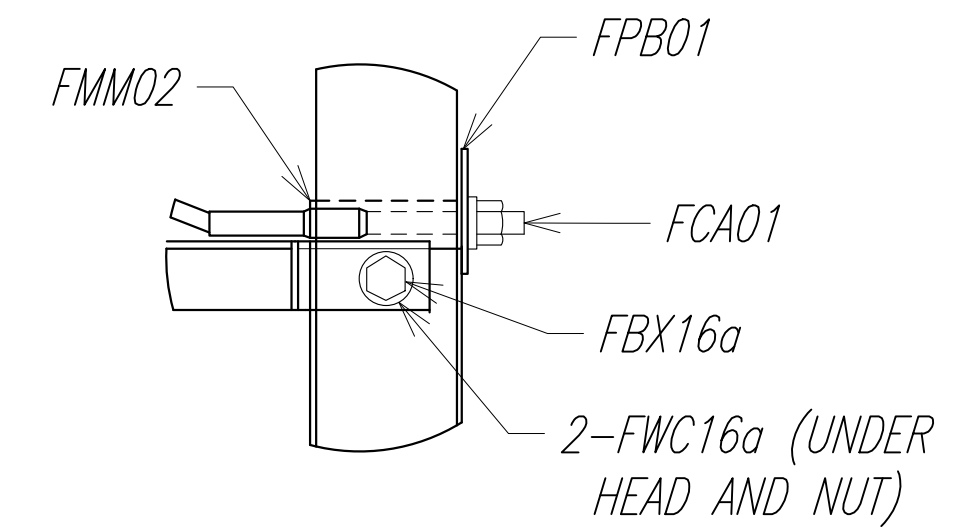
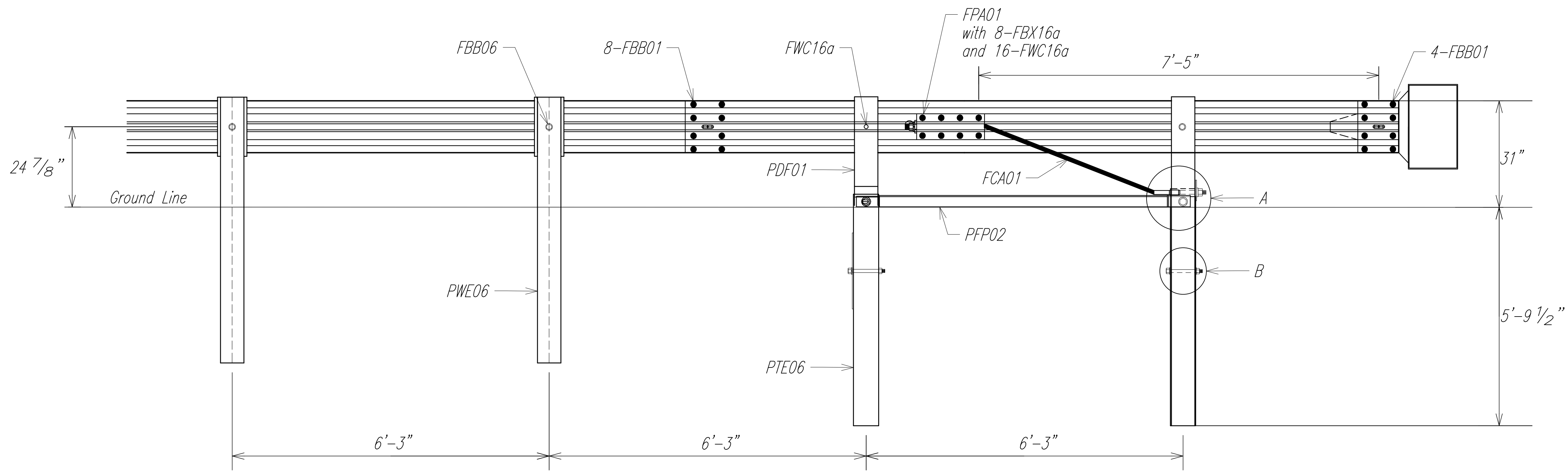
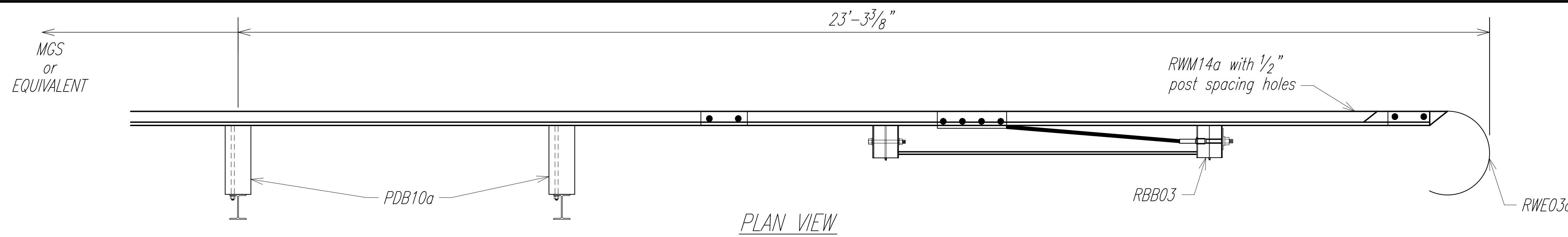
GUARDRAIL DETAILS

*Freeway Management System, Phase 4
Federal-Aid Project No. NH-0300(176)R*

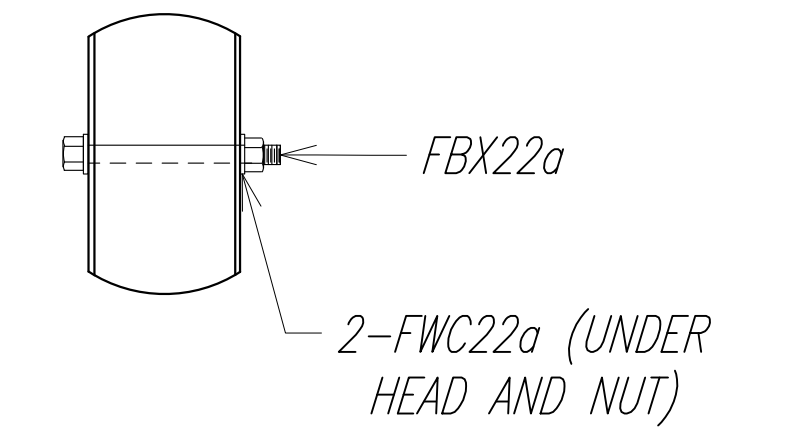
Scale: As Indicated Date: April 2026

SHEET No. 3 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL-AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	88	111

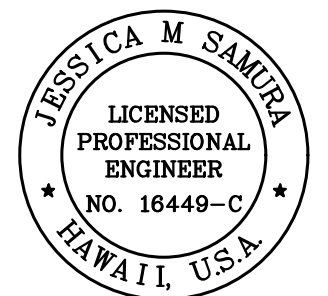
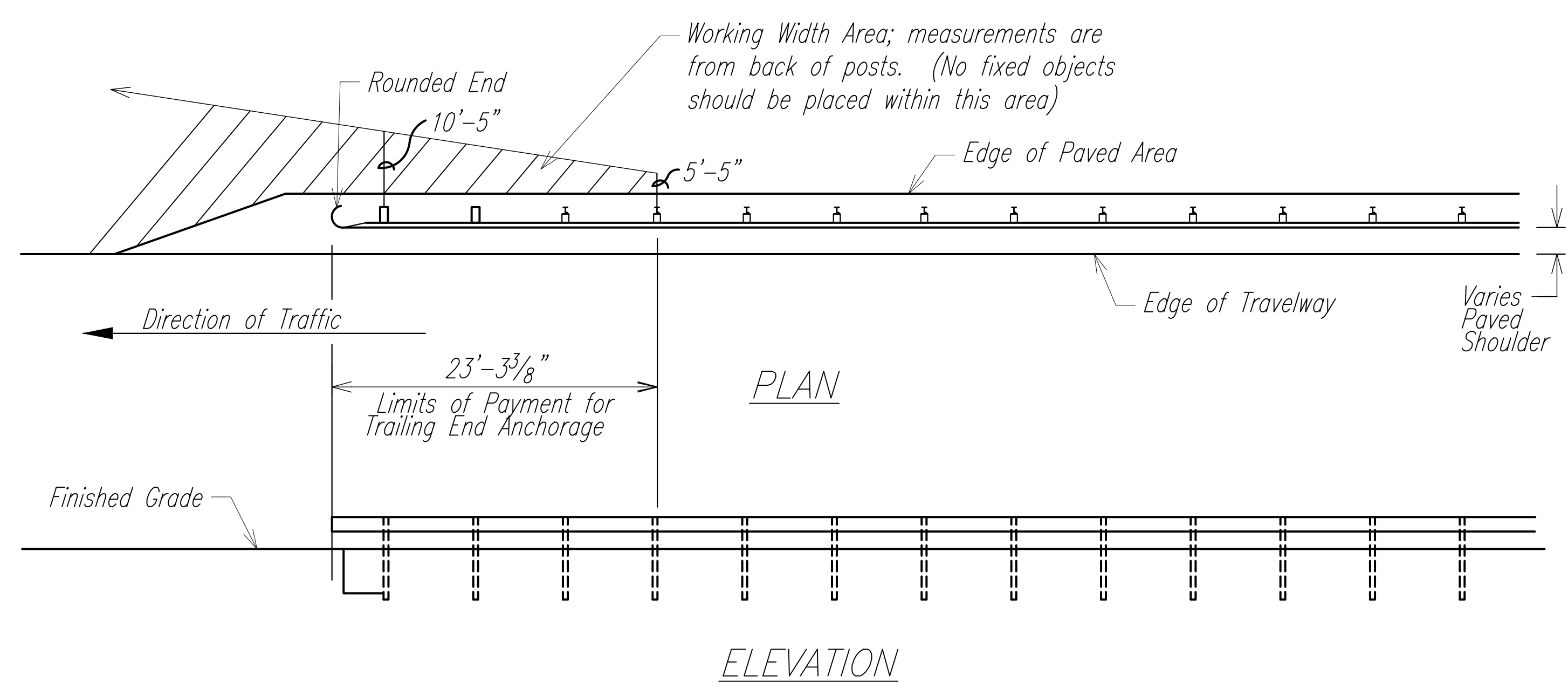


DETAIL A



DETAIL B

ITEM NO.	QTY	COMPONENTS
FBB01	12	Guardrail Bolt and Nut
FBB03	2	Guardrail Bolt and Nut
FBB06	1	Guardrail Bolt and Nut
FBX16a	2	Hex Head Bolt (10") and Nut
FBX16a	8	Hex Head Bolt (1 1/2") and Nut
FBX22a	2	Hex Head Bolt (7 1/2") and Nut
FCA01	1	BCT Anchor Cable Assembly
PDB10a	2	MGS Timber Blockout
PPF02	1	Strut and Yoke Assembly
PWE06	1	Wide-Flange Guardrail Post
FMM02	1	BCT Post Sleeve
FPA01	1	Anchor Bracket Assembly
FPB01	1	BCT Bearing Plate
FWC16a	22	Circular Washer
FWC22a	4	Circular Washer
PDF01	2	BCT Timber Post
PTE06	2	Foundation Tube
RWE03a	1	W-Beam Rounded End Section
RWM14a	1	W-Beam MGS End Section



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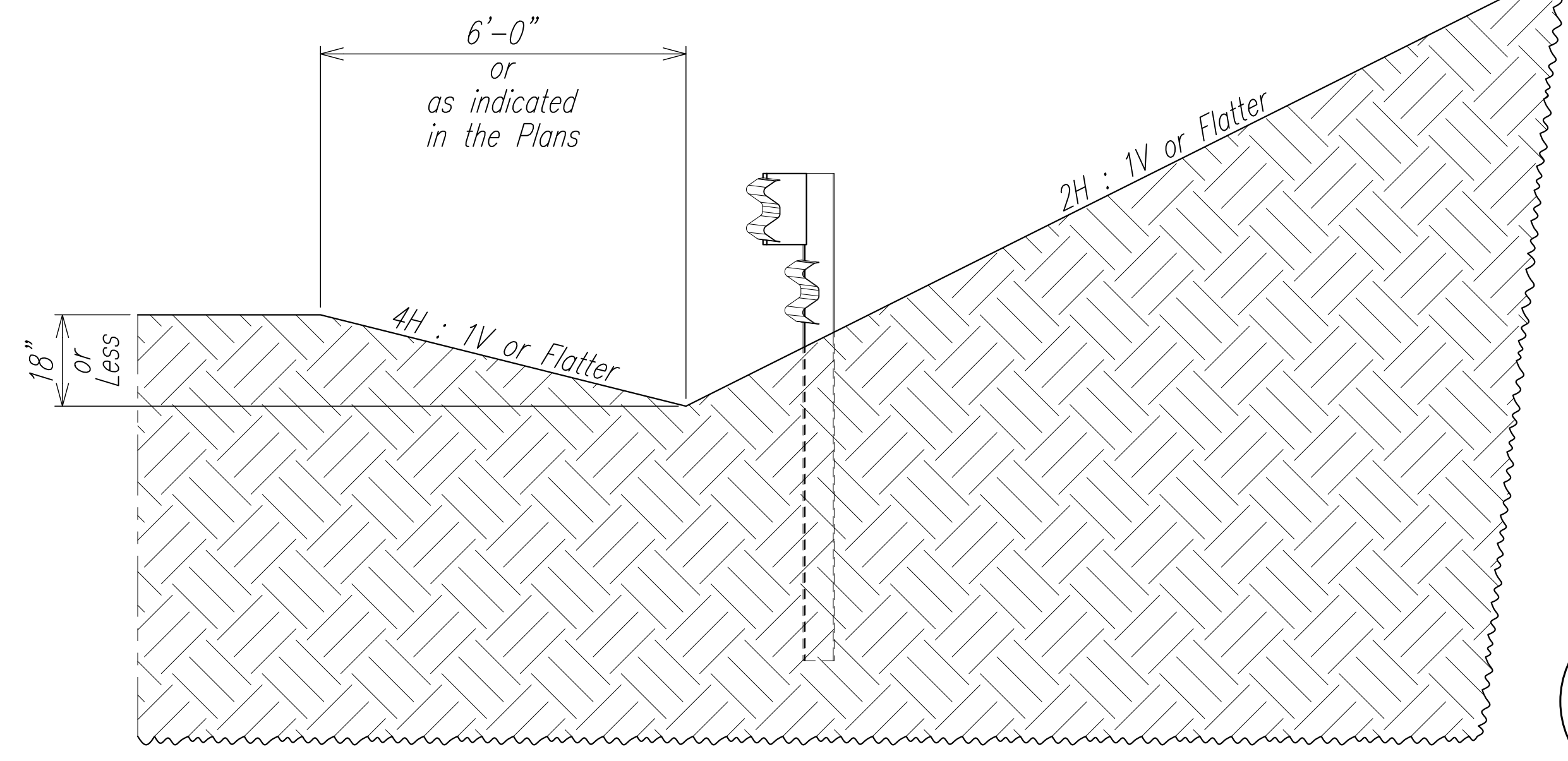
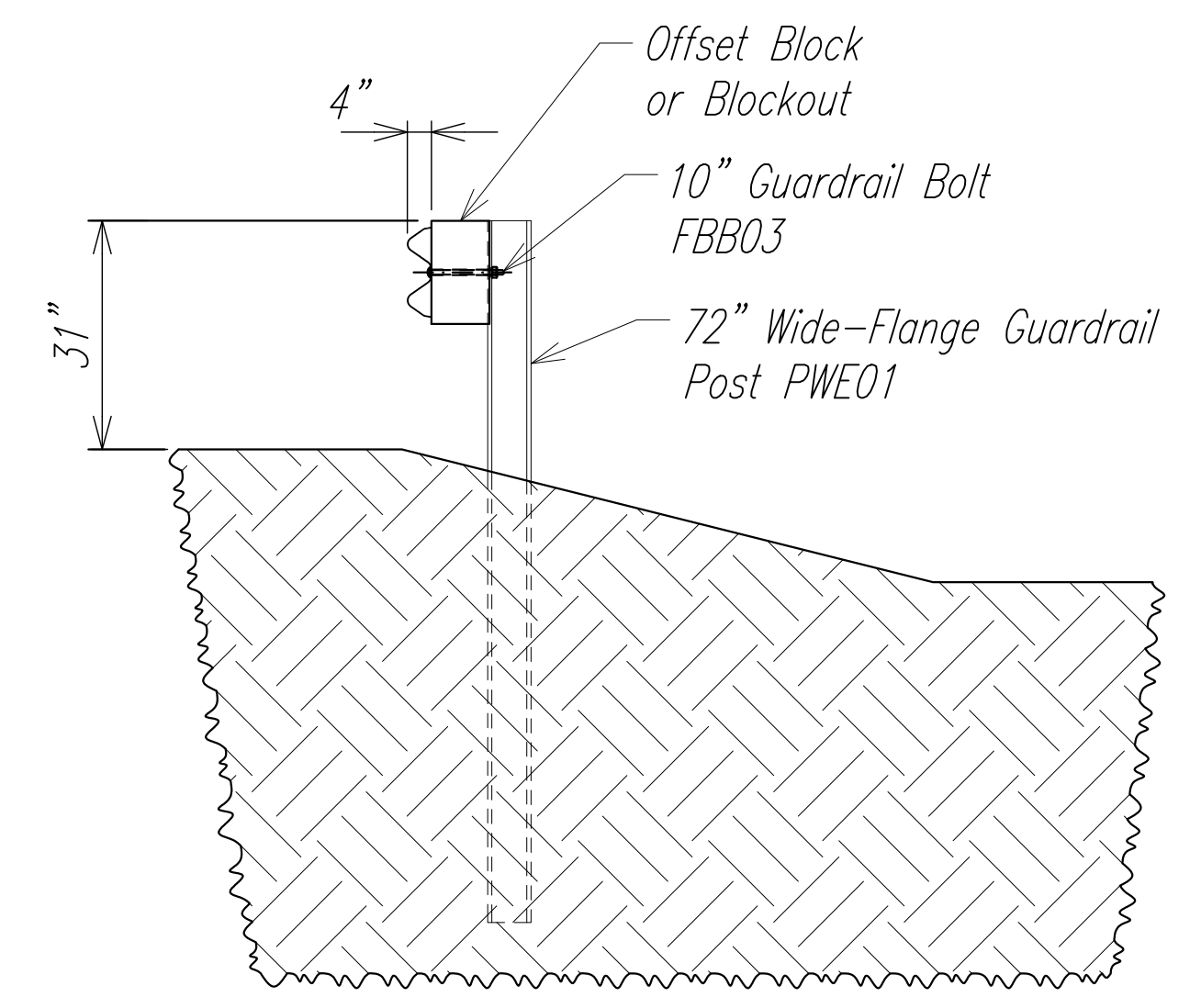
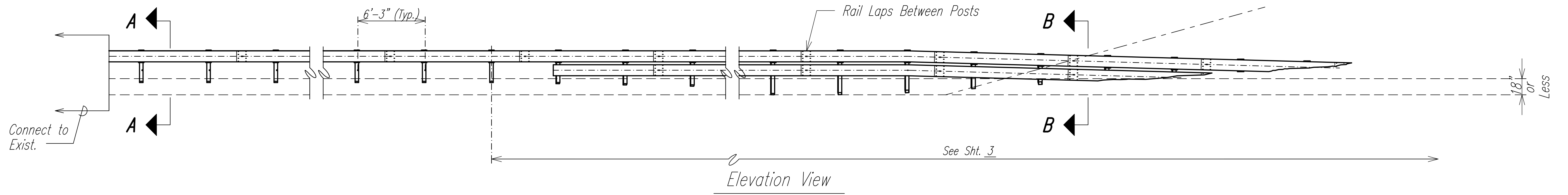
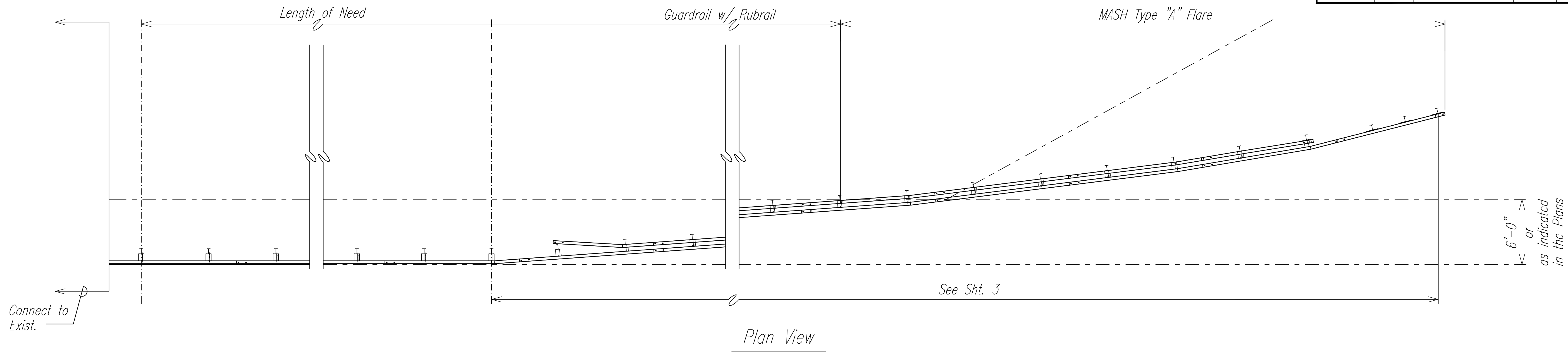
STATE OF HAWAII
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 HIGHWAYS DIVISION

TRAILING END ANCHORAGE SYSTEM

Freeway Management System, Phase 4
Federal-Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

ORIGINAL PLAN No. _____
 SURVEY PLOTTED BY _____ DATE _____
 DRAWN BY _____
 TRACED BY _____
 DESIGNED BY _____
 QUANTITIES BY _____
 CHECKED BY _____

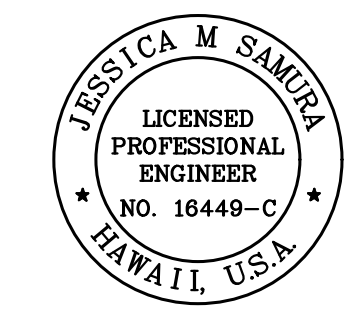
FED. ROAD DIST. NO.	STATE	FEDERAL-AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	89	111



ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

- Notes:
- Backfill Post holes with AASHTO M147-65(2004), Grade B crushed limestone road base, compacted to MASH standard.
 - 75" Post spacing typical for LoN and Terminal unless otherwise indicated.

TERMINAL PLAN & ELEVATION VIEW AND SECTIONS
(BURIED IN BACKSLOPE)



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 Signature: *Jessica M. Samura*
 EXPIRATION DATE OF LICENSE: 4/30/28

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

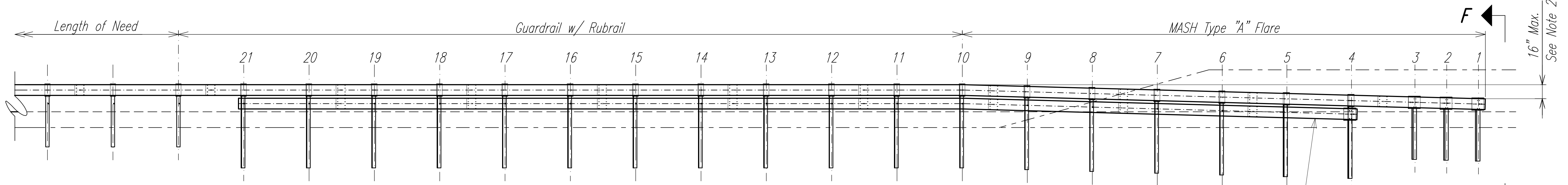
MASH TYPE "A" FLARE

*Freeway Management System, Phase 4
 Federal-Aid Project No. NH-0300(176)R*

Scale: As Indicated Date: April 2026

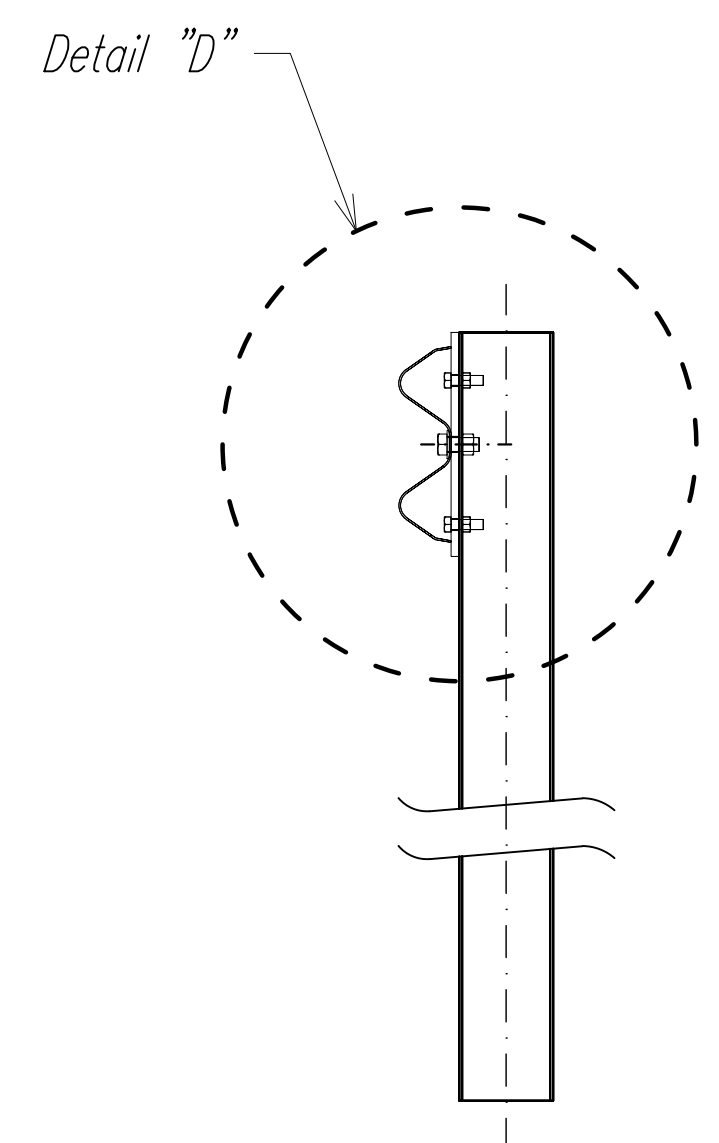
SHEET No. 1 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL-AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	90	111

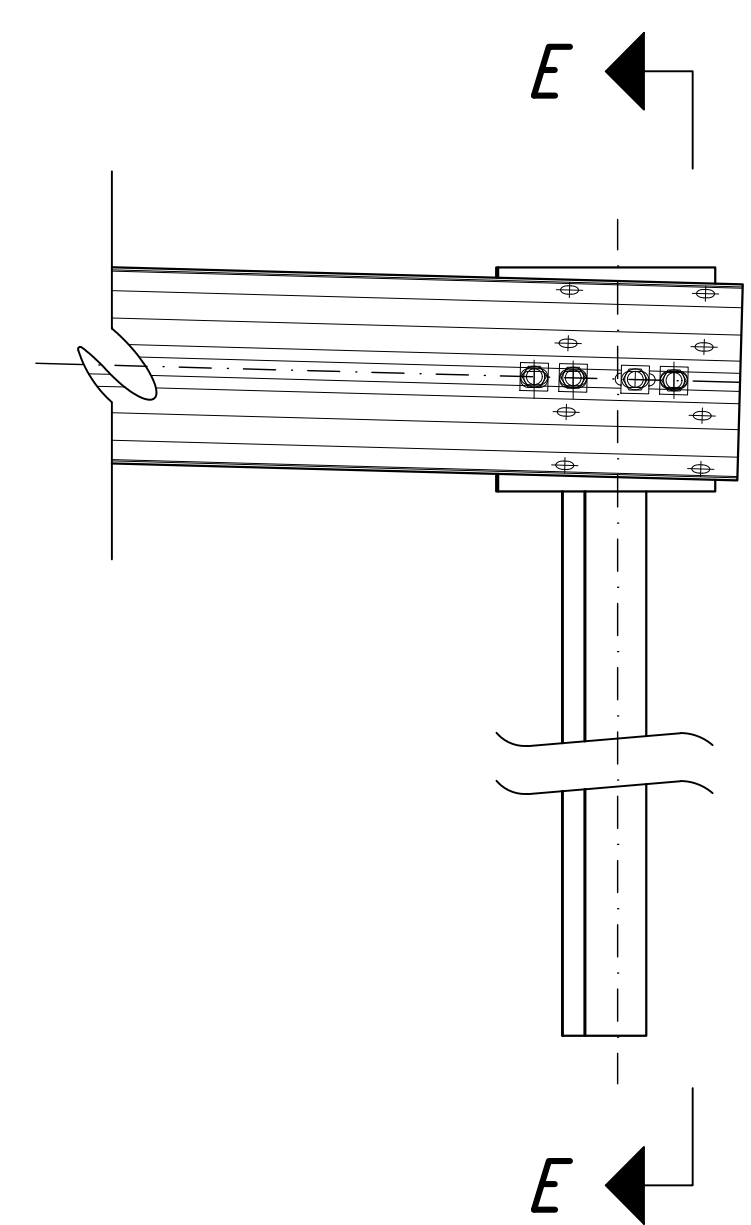


Terminal Details - Elevation

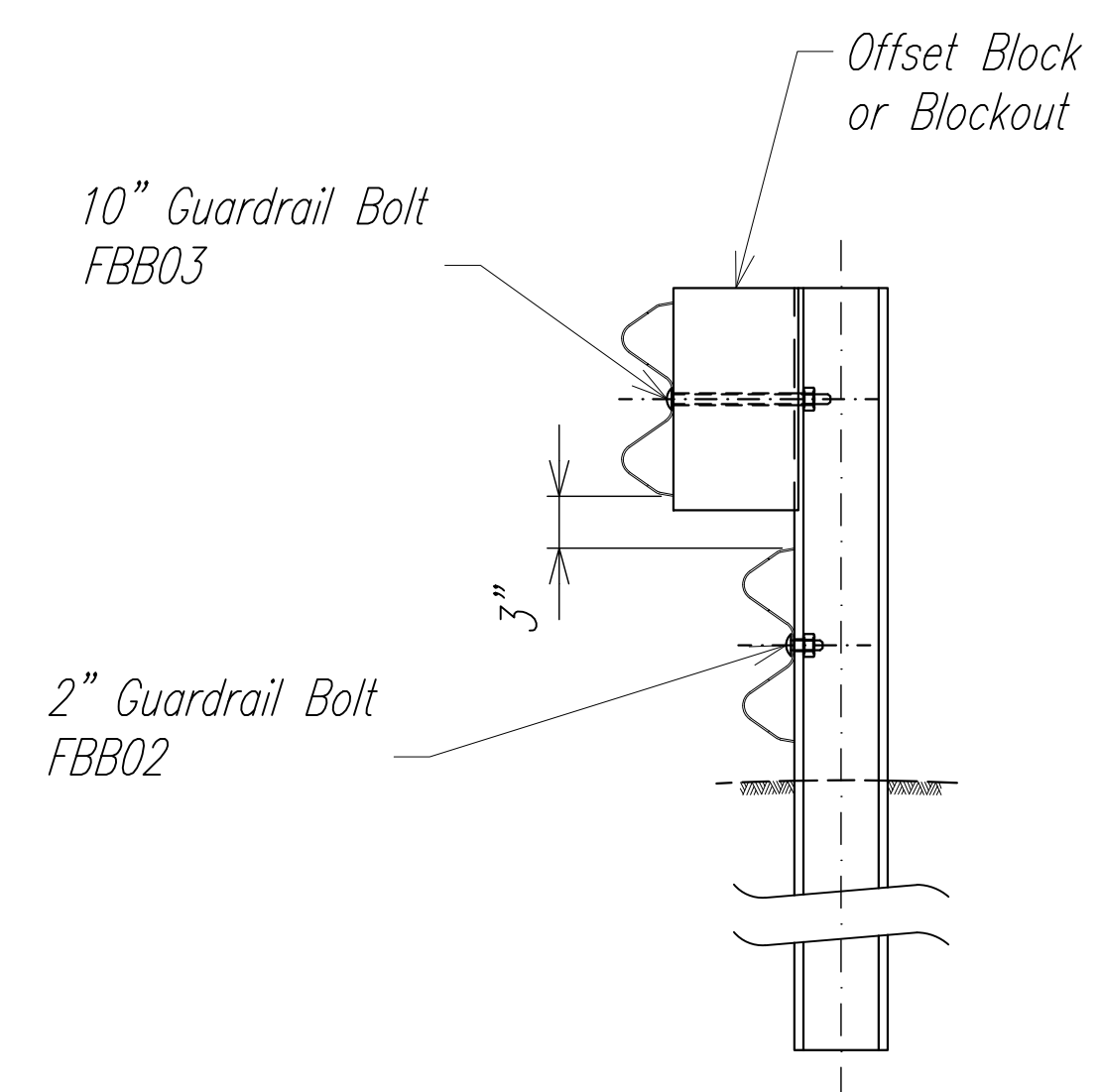
12 ga. W-beam,
9'-4 1/2" Span



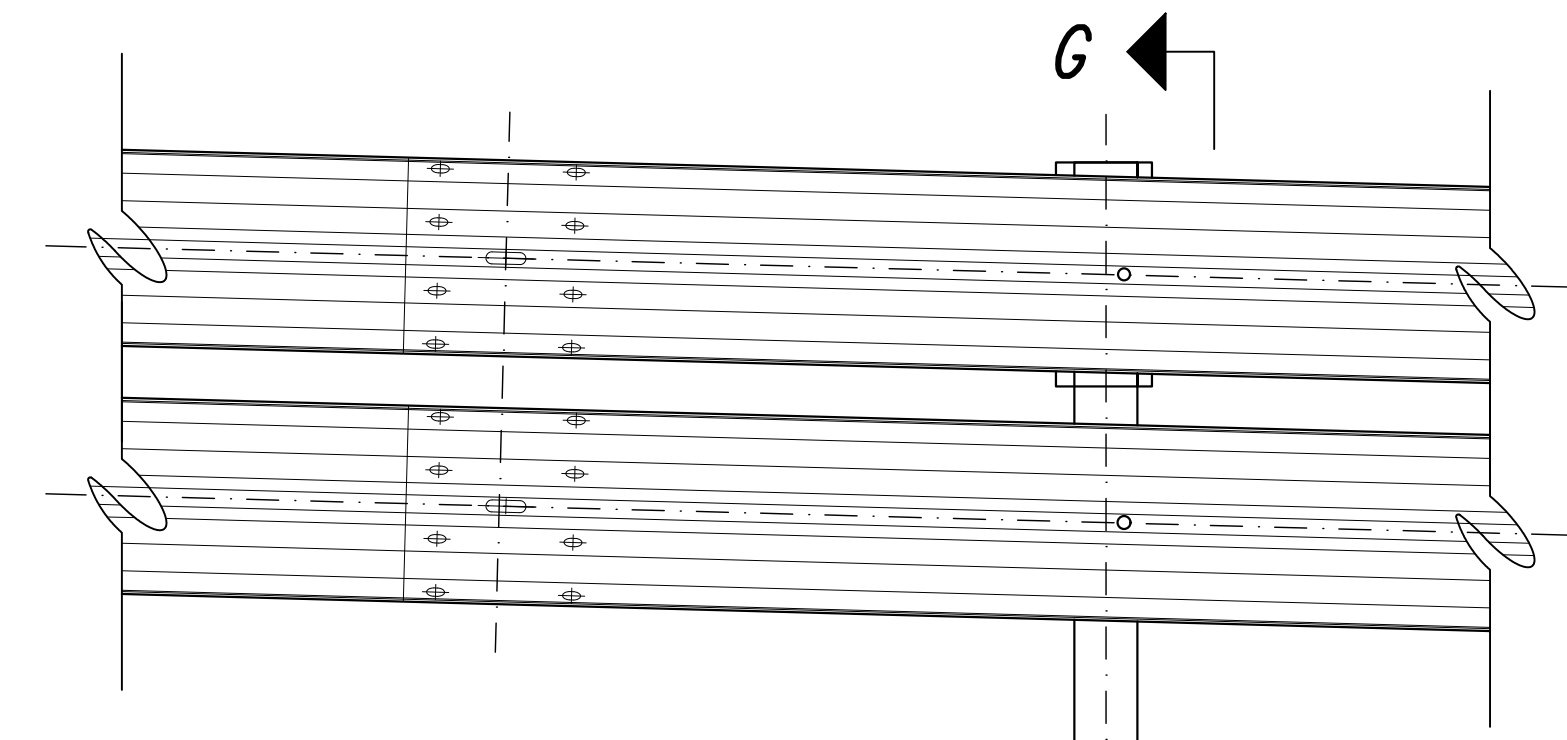
Section E-E



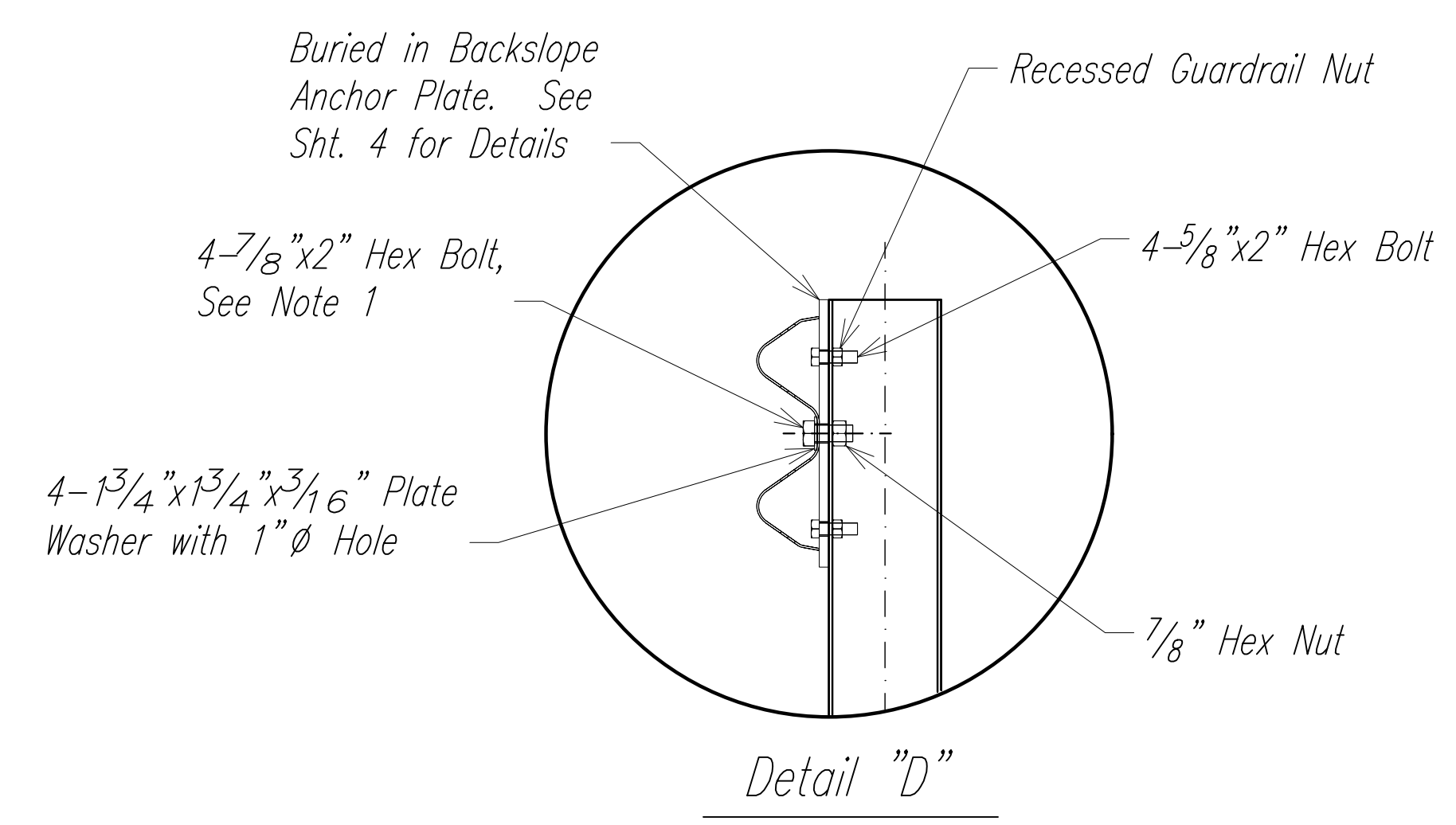
Post 1



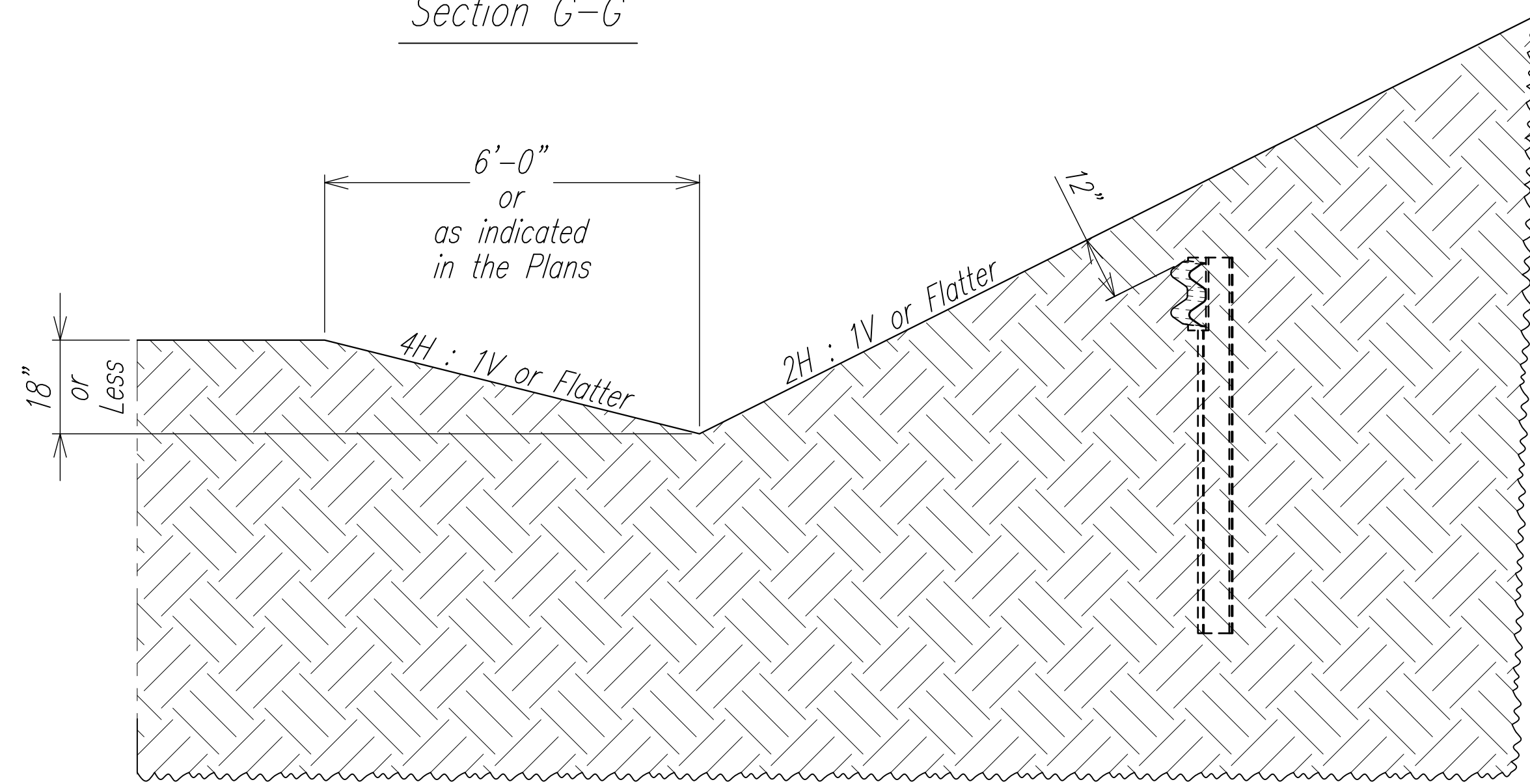
Section G-G



Post 7
Typ. @ Posts 5-20



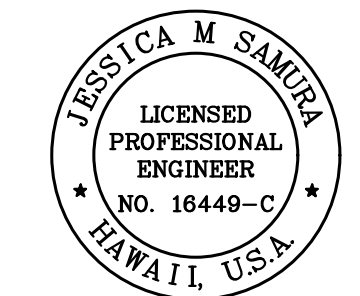
Detail "D"



Section F-F

TERMINAL ELEVATION & DETAILS
(BURIED IN BACKSLOPE)

- Notes:
1. Recessed Guardrail Nuts typical on all 5/8" Bolts. Anchor Plate and hardware are holes in Guardrail as typical on top rail at Posts 1-3, and rub rail at Post 4. Field drill 1" Ø 7" Bolts at Posts 1-4. Hex head bolts are ASTM A307. needed for 8
 2. Rail height changes 16" Maximum from Post 10 to 1 to achieve 12" of soil coverage at Post 1.



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 4/30/26
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 HIGHWAYS DIVISION

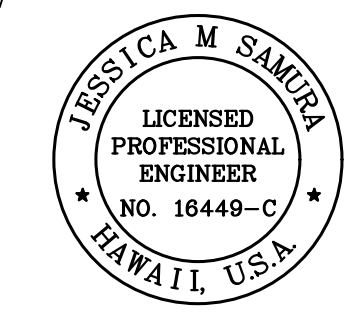
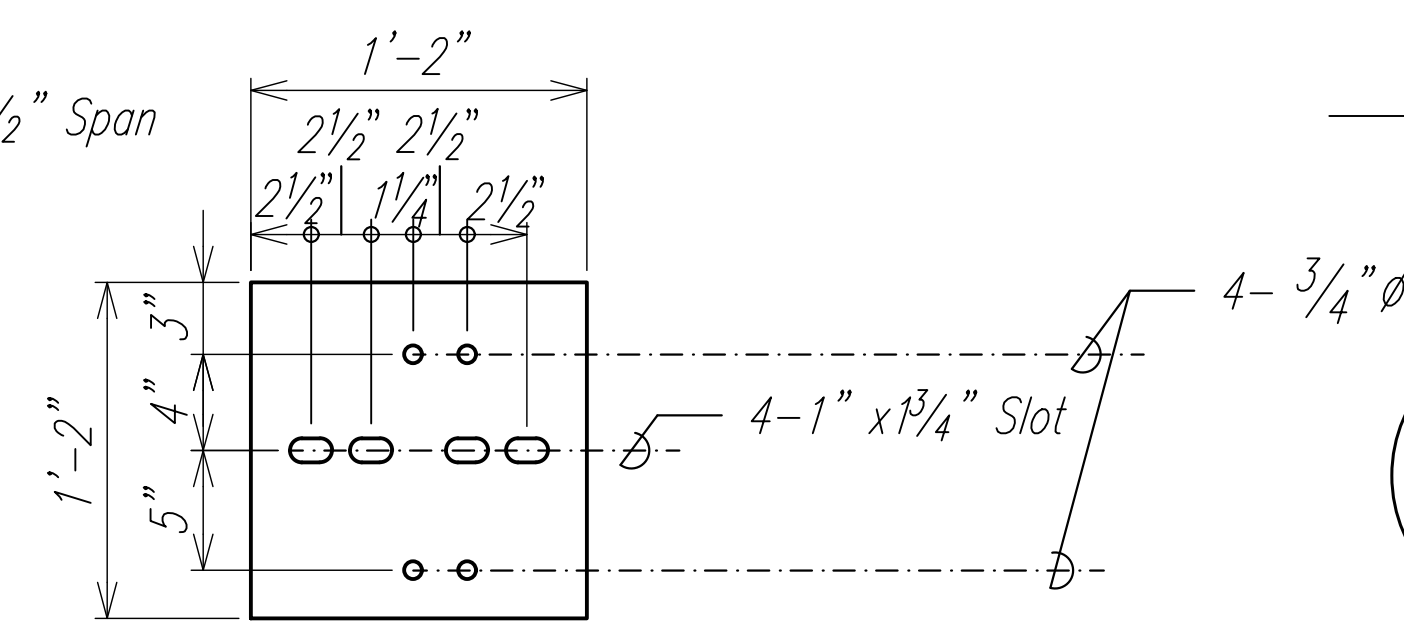
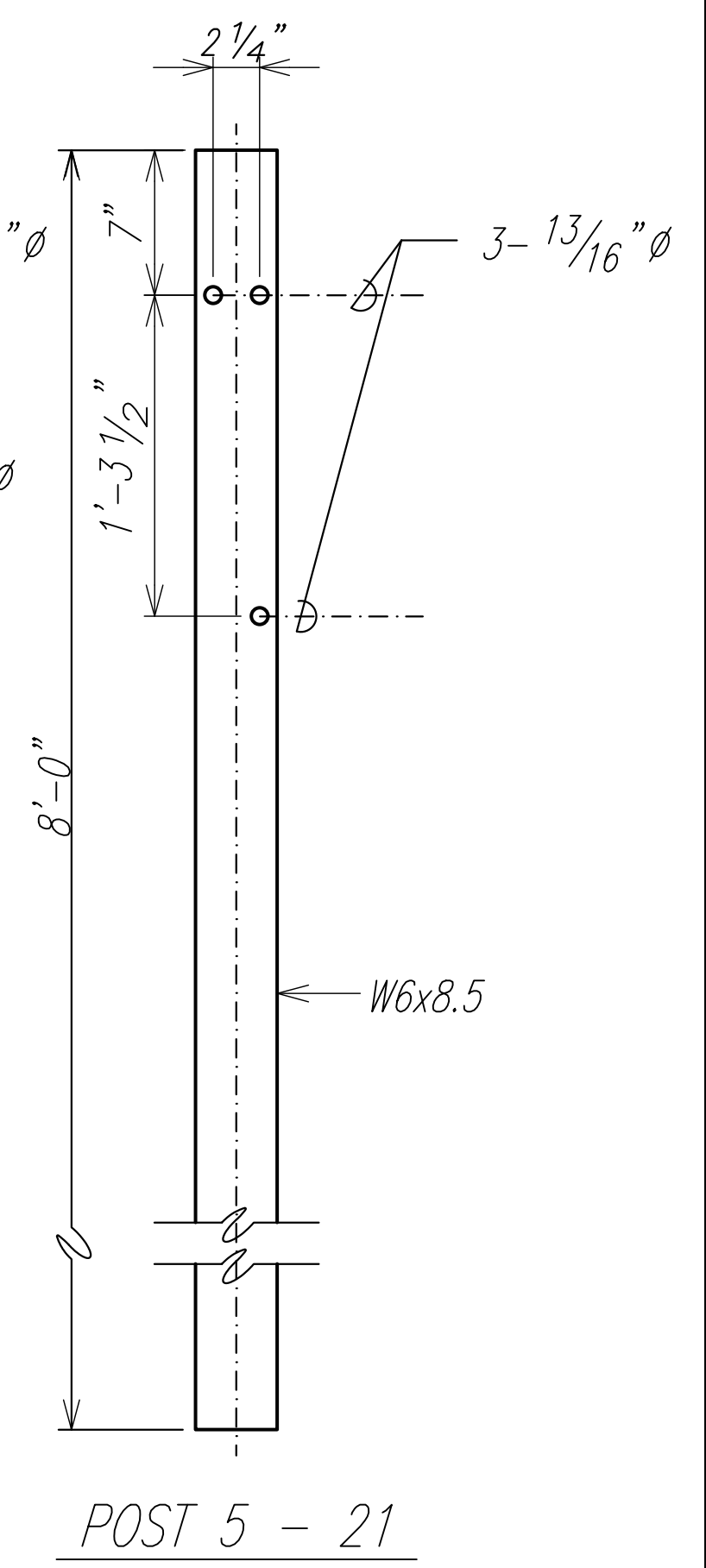
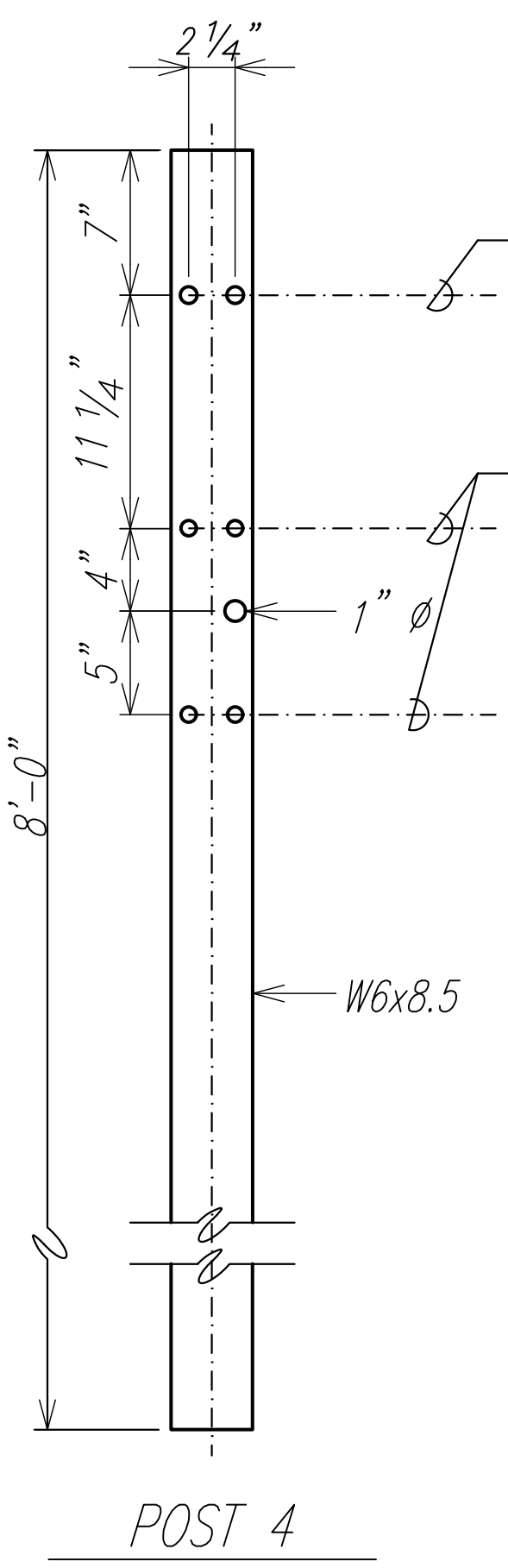
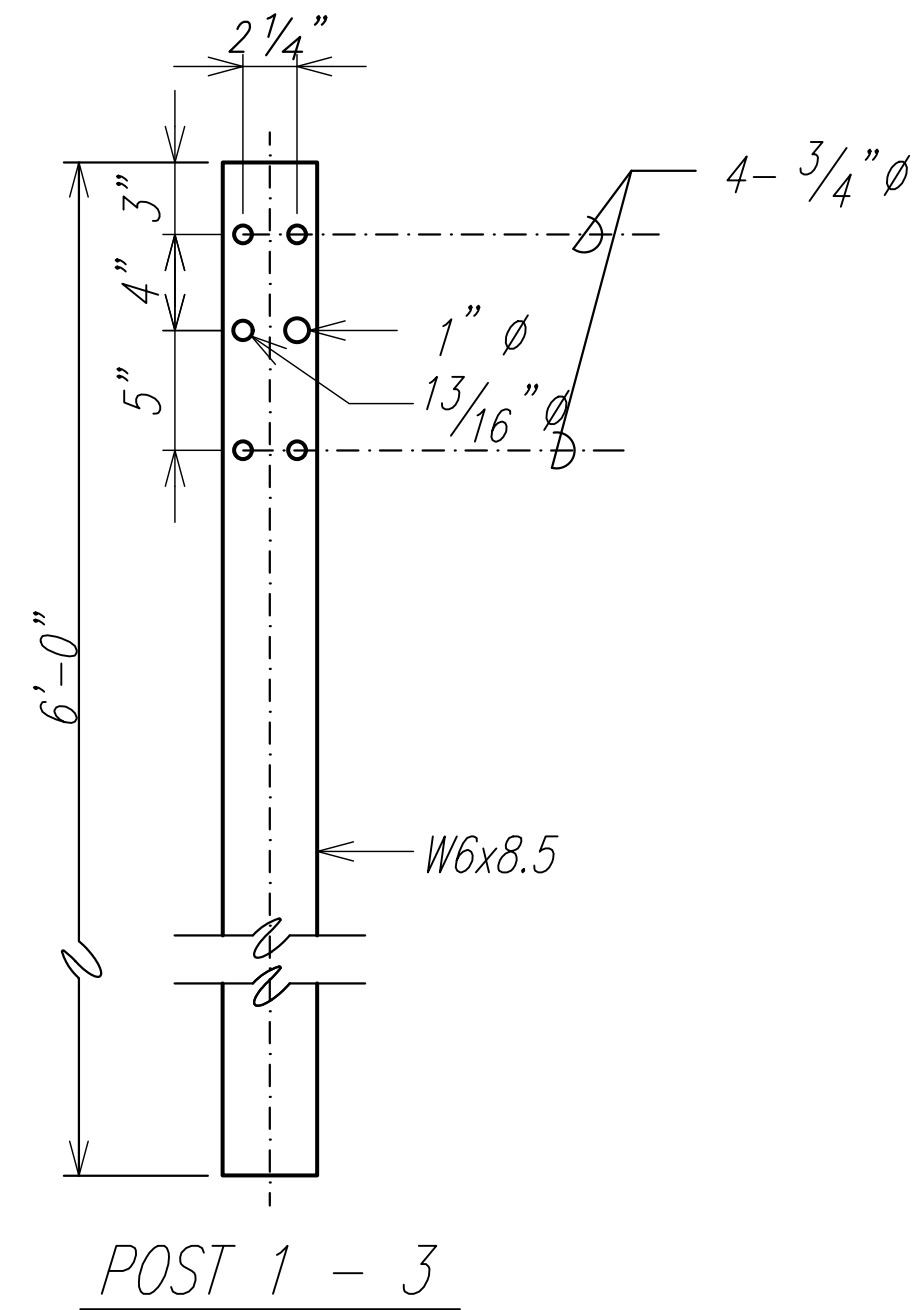
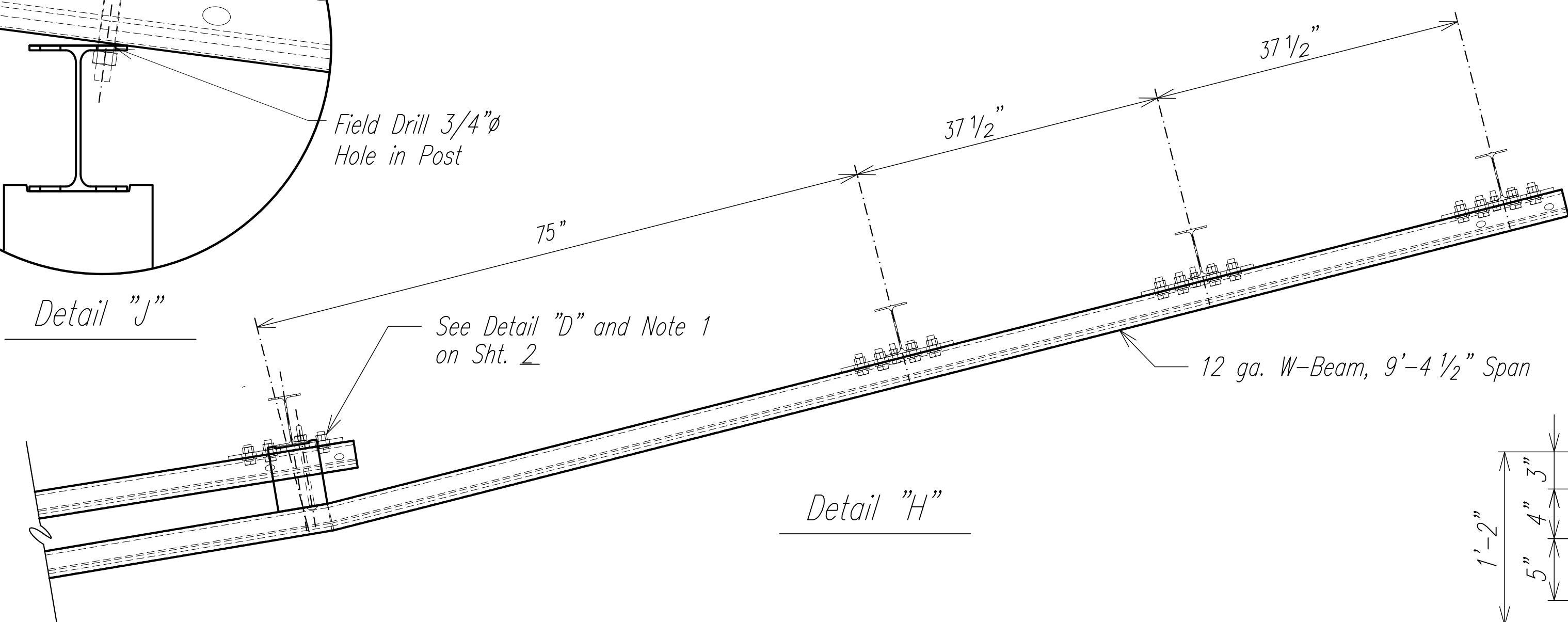
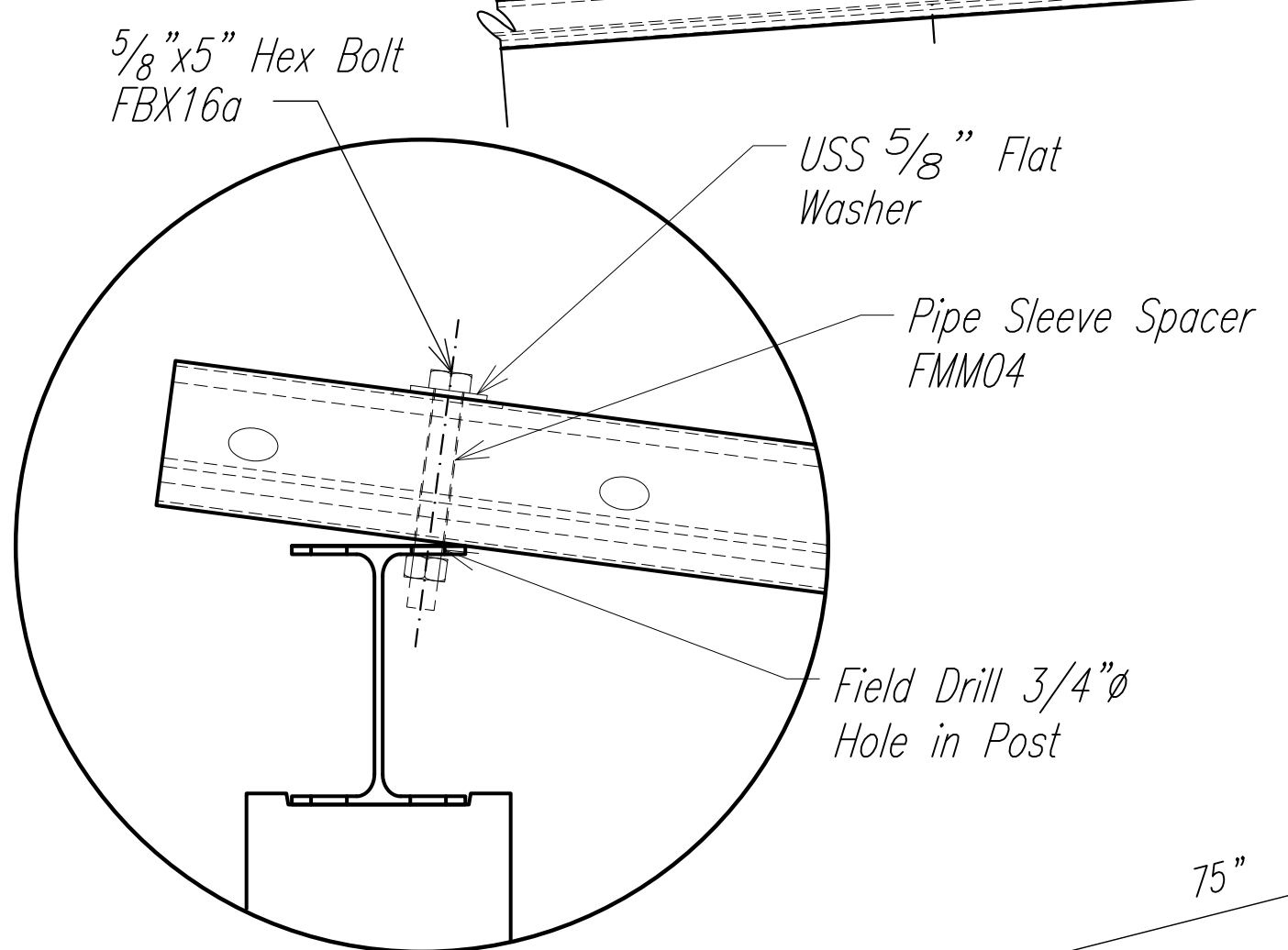
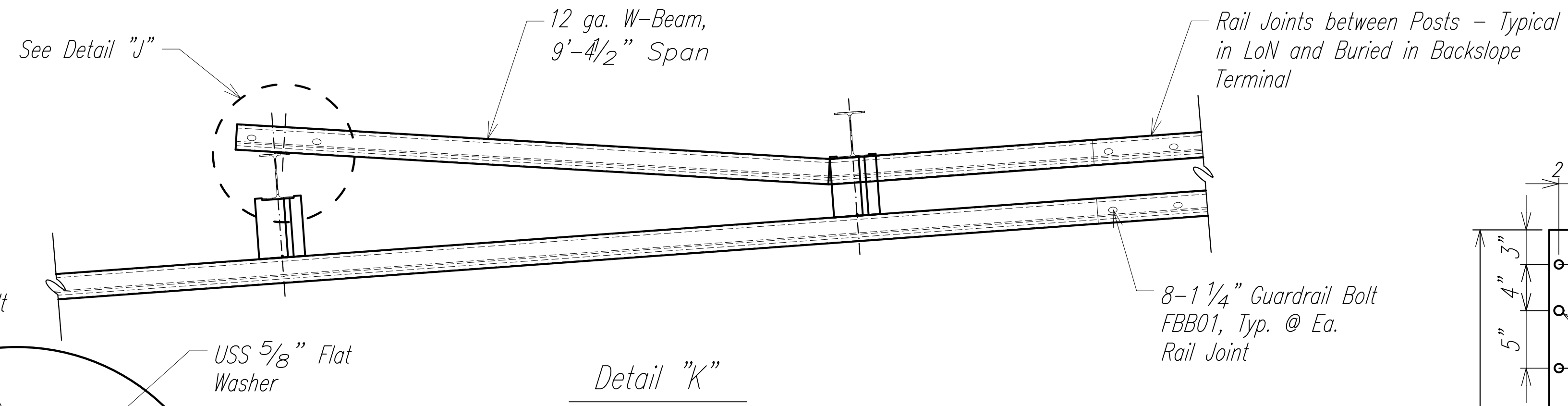
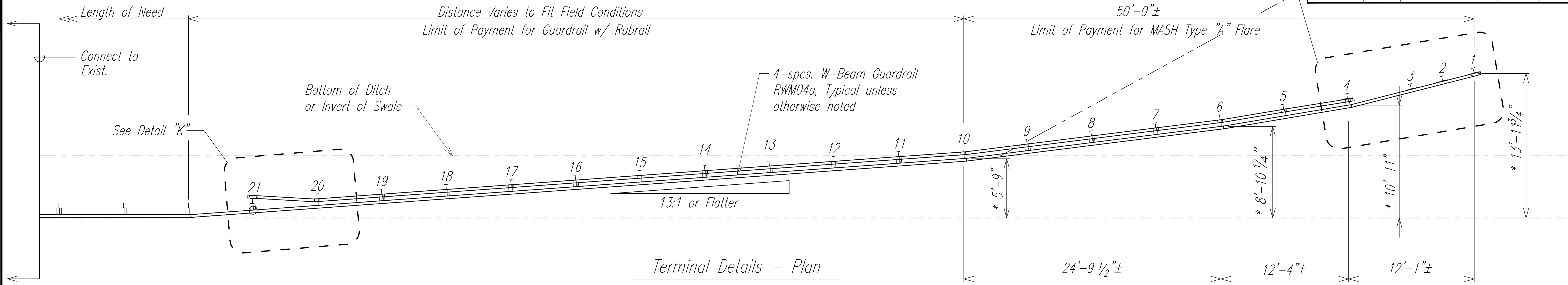
MASH TYPE "A' FLARE

Freeway Management System, Phase 4
 Federal-Aid Project No. NH-0300(176)R
 Scale: As Indicated Date: April 2026

SHEET No. 2 OF 3 SHEETS

ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

FED. ROAD DIST. NO.	STATE	FEDERAL-AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	91	111



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Signature: *Jessica M. Samura*

4/30/28
EXPIRATION DATE OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MASH TYPE "A" FLARE

Freeway Management System, Phase 4
Federal-Aid Project No. NH-0300(176)R

Scale: As Indicated Date: April 2026

SHEET No. 3 OF 3 SHEETS

TERMINAL PLANS & DETAILS
(BURIED IN BACKSLOPE)

Note:
1. * These dimensions indicate the offset to the back of the Rail at Posts 1, 4, 6 and 10, based on a 6'-0" Wide Ditch or Swale foreslope.

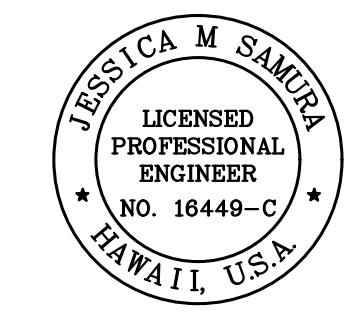
DATE	_____
DESIGNED BY	_____
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QUANTITIES BY	_____
NO. _____	

FED. ROAD DIST. NO.	STATE	FEDERAL-AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	92	111

General Notes for Traffic Control (State R/W):

1. The Contractor shall make minor adjustments at intersections, driveways, bridges, structures, etc., to fit field conditions.
2. Channelizer cones or delineators shall be extended to a point where they are visible to approaching traffic.
3. Traffic control devices shall be installed such that the sign or device farthest from the work area is placed first. The others shall then be placed progressively toward the work area.
4. Regulatory and warning signs within the construction zone that are in conflict with the traffic control plans shall be removed or covered promptly. Costs associated with this work are to be considered incidental.
5. All construction warning signs shall be promptly removed or covered whenever the message is not applicable or not in use. Sign coverings shall be maintained continuously. Costs associated with this work are to be considered incidental.
6. Flaggers and/or police officers shall be in sight of each other or in direct communication at all times.
7. The Contractor shall install a flashing arrow signal as shown on the traffic control plans.
8. All traffic lanes shall be a minimum of 10 feet wide.
9. The backs of all signs used for traffic control shall be appropriately covered to preclude the display of inapplicable sign messages (i.e., when signs have messages on both faces).
10. Lane closure shall be limited only to the extent of accomplishing each day's work. As soon as each day's work is completed, the Permittee shall remove all traffic control devices no longer needed to permit free and safe passage of public traffic. Removal shall be in the reverse order of installation. Existing faded or obliterated pavement markings that are necessary for safe traffic flow in the construction area shall be replaced with temporary or permanent markings before opening the roadway to public traffic each day.
11. Permanent pavement markings and traffic signs shall be replaced upon completion of each phase of work.
12. Channelizer cones and delineators shall be spaced at a maximum distance of 20 feet apart. A minimum of six (6) channelizing devices shall be used for each taper length.
13. Driveways shall be kept open unless the owners of the property using the driveway are otherwise provided for satisfactorily. Further, the Permittee shall control traffic going into and out of driveways.
14. Buffer and taper areas on approach to any work area shall be kept clear of vehicles and equipment.
15. A high level warning device (flag tree) shall be installed on approach to all work areas.
16. "No Parking" signs shall be posted within any work area and for the buffer and taper areas approaching the work area.
17. No steel plates shall be used where design speeds exceed 35 mph and on Interstate H-1. When used the steel plates shall make no noise when crossed by vehicles and shall have a non-skid coating at all times.
18. The Contractor shall use only compliant Drum-like, Barrel-like or Trim Line Channelizer (not tubular) more than 42 inches tall with appropriate ballast for construction activities involving lane closures. Costs associated with this work are to be considered incidental.
19. Temporary traffic control signs that will be used for more than three days shall be on posts. Temporary signs shall not be used for that type of installation. The requirement may be waived by the Engineer for work on Interstate H-1.

ORIGINAL PLAN	DATE
NO. _____	_____
DESIGNED BY	DATE
QUANTITIES BY	_____
CHECKED BY	_____
TRACED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
TRACED BY	_____
DRAWN BY	_____
DATE	_____



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 Signature: *Jessica M. Samura*
 Date: 4/30/28
 OF LICENSE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

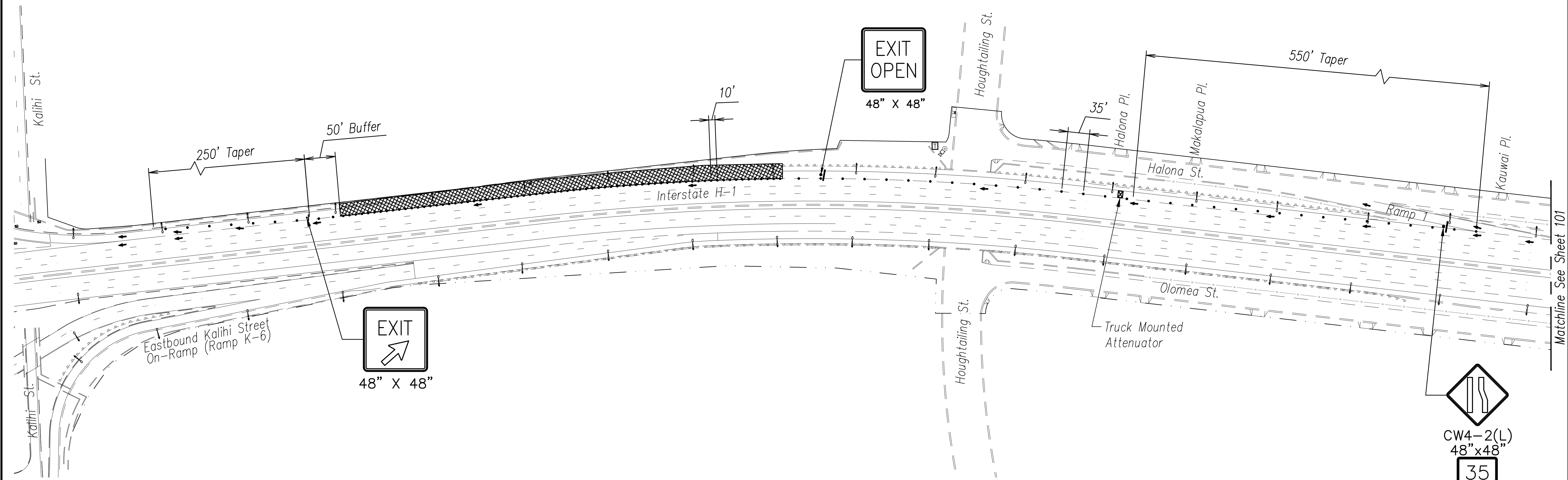
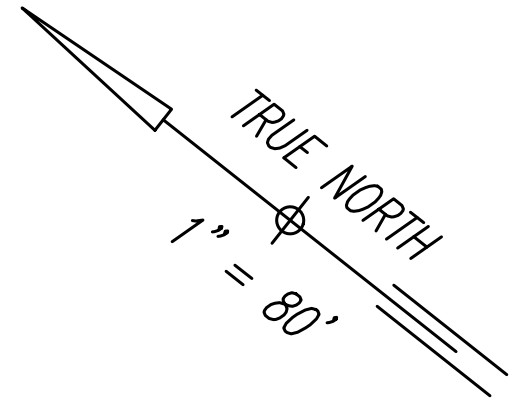
Traffic Control Notes

Freeway Management System, Phase 4
Federal-Aid Project No. NH-0300(176)R

Scale: As Indicated Date: April 2026

SHEET No. 1 OF 1 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL-AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	93	111

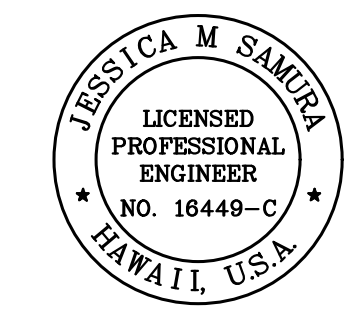
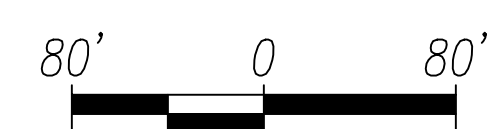


ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NOTE BOOK No.	

- Legend**
- Work Area
 - Sign
 - Cone
 - Arrowboard

Notes:

1. Lane closures will be allowed only from 9:00PM to 4:00AM, Sunday through Thursday. See Special Provisions Section 645.03(F).
2. The Contractor shall submit requests for detours and road closures in accordance with Hawaii Standard Specifications Subsection 645.03(F). Once the request has been approved by HDOT, the Contractor is required to provide a Weekly Lane Closure Request to the HDOT Construction Field Office at least one (1) week ahead of all upcoming work.



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 Date: 4/30/28
 EXPIRATION DATE OF LICENSE

STATE OF HAWAII
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 HIGHWAYS DIVISION

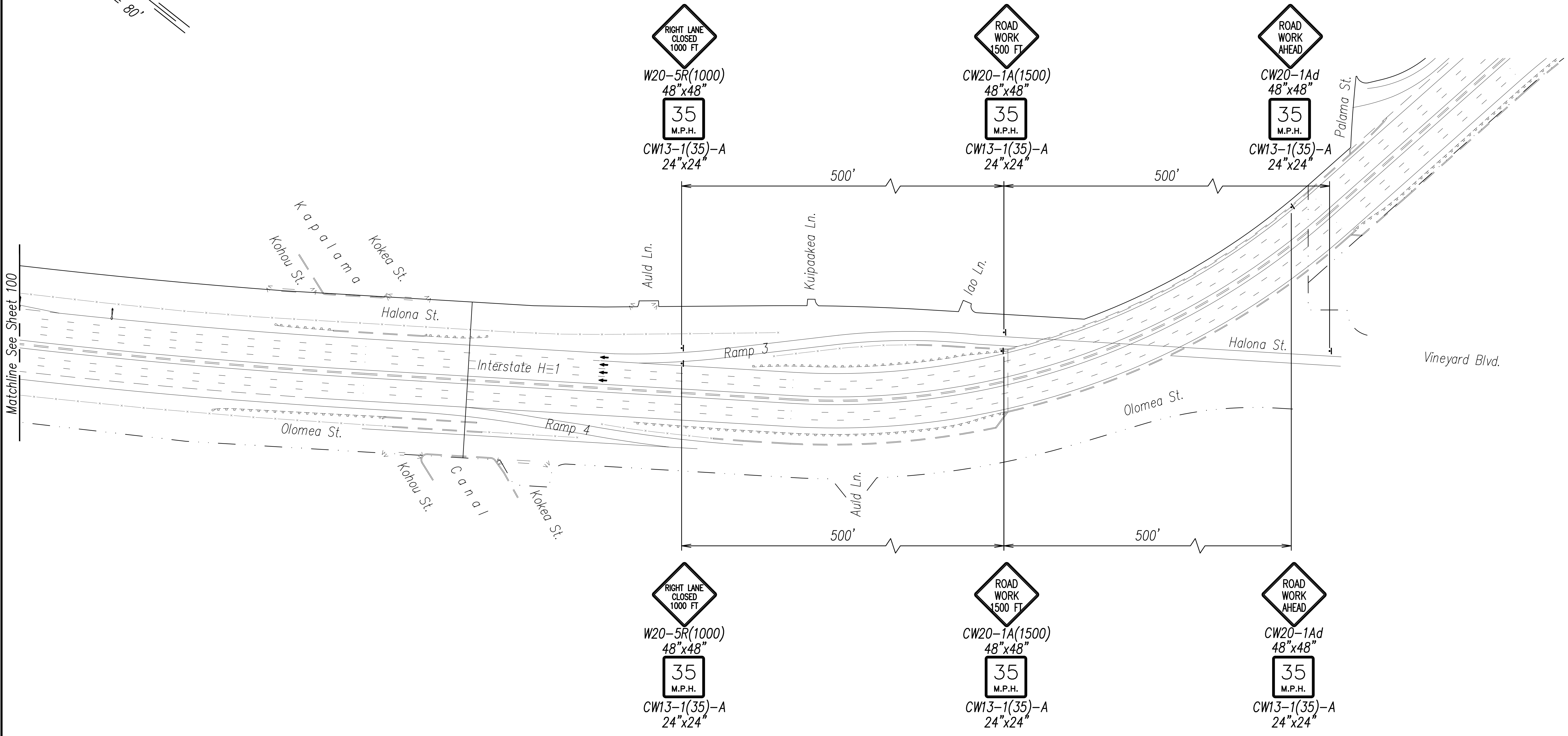
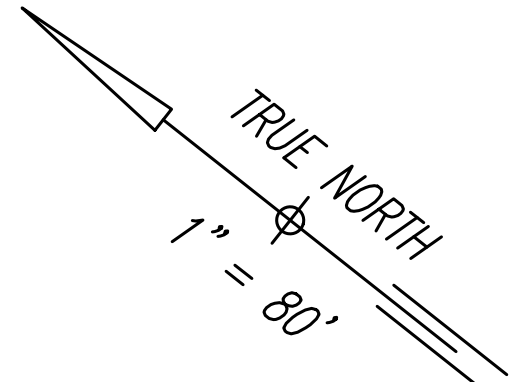
H1 FREEWAY TRAFFIC CONTROL PLAN

*Freeway Management System, Phase 4
 Federal-Aid Project No. NH-0300(176)R*

Scale: As Indicated Date: April 2026

SHEET No. 1 OF 2 SHEETS

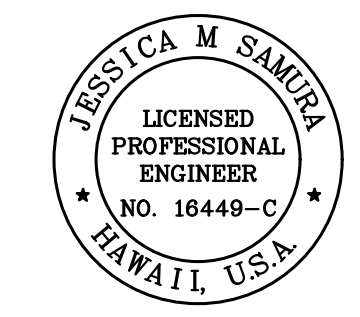
FED. ROAD DIST. NO.	STATE	FEDERAL-AID PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	94	111



ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

- Legend**
- Work Area
 - Sign
 - Cone
 - Arrowboard

- Notes:**
- Lane closures will be allowed only from 9:00PM to 4:00AM, Sunday through Thursday. See Special Provisions Section 645.03(F).
 - The Contractor shall submit requests for detours and road closures in accordance with Hawaii Standard Specifications Subsection 645.03(F). Once the request has been approved by HDOT, the Contractor is required to provide a Weekly Lane Closure Request to the HDOT Construction Field Office at least one (1) week ahead of all upcoming work.



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 EXPIRATION DATE OF LICENSE: 4/30/28

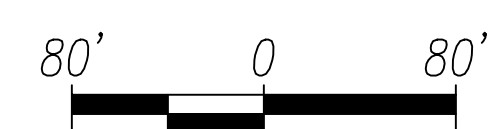
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

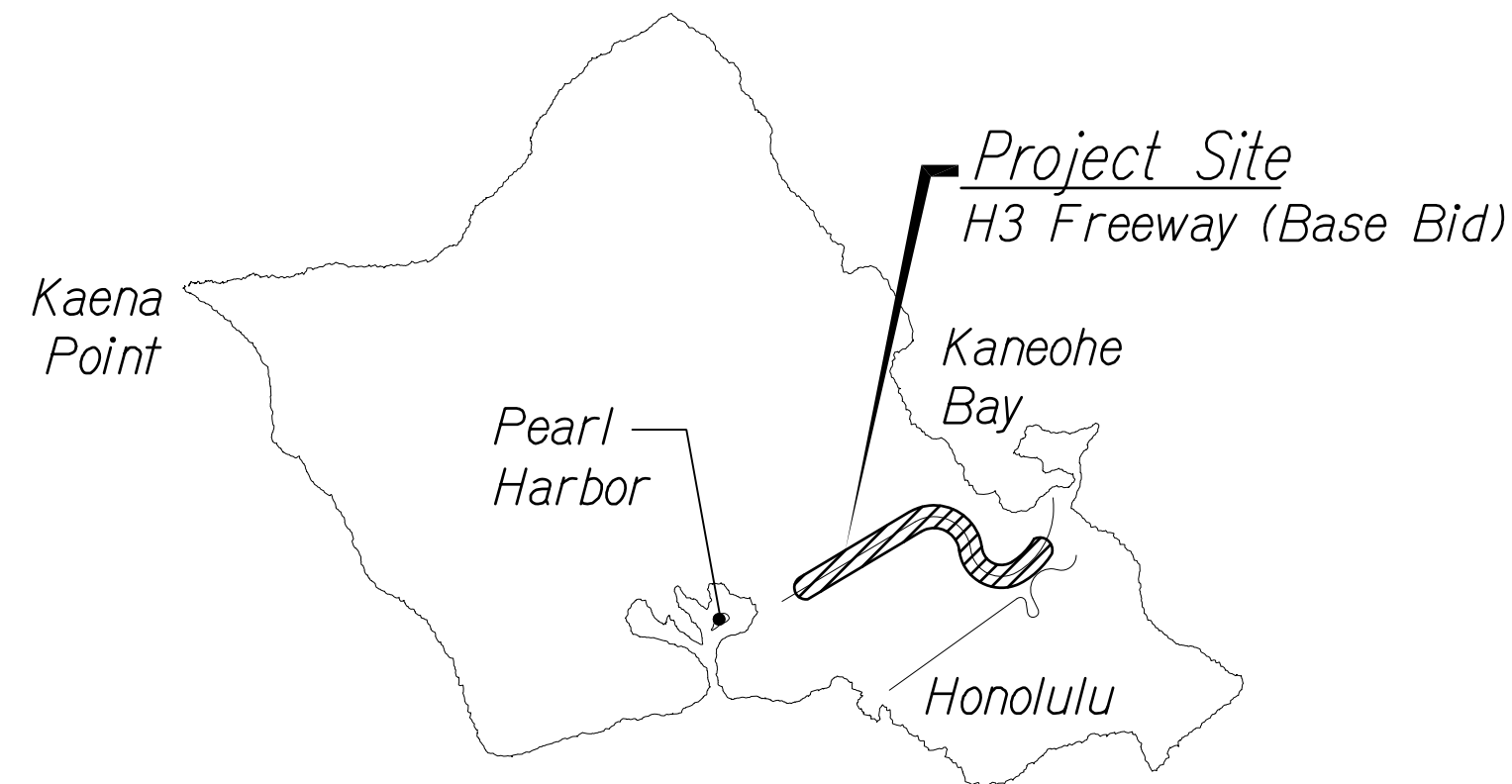
H1 FREEWAY TRAFFIC CONTROL PLAN

*Freeway Management System, Phase 4
 Federal-Aid Project No. NH-0300(176)R*

Scale: As Indicated Date: April 2026

SHEET No. 2 OF 2 SHEETS





Notes For Construction:

- A. The Location Of Overhead And Underground Facilities Shown On The Plans Are From Existing Records With Varying Degrees Of Accuracy And Are Not Guaranteed As Shown. The Contractor Shall Exercise Extreme Caution Whenever Construction Crosses Or Is In Proximity Of Underground Lines And Shall Maintain Adequate Clearance When Operating Equipment Under Any Overhead Lines.
- B. The Contractor Is To Comply With The Directions Of The State Of Hawaii Occupational Safety And Health Law (dosh).
- C. When Trench Excavation Is Adjacent To Existing Structures Or Facilities, The Contractor Is Responsible For Properly Sheeting And Bracing The Excavation And Stabilizing The Existing Ground To Render It Safe And Secure From Possible Slides, Cave-ins And Settlement, And For Properly Supporting Existing Structures And Facilities With Beams, Struts Or Underpinning To Fully Protect It From Damage.
- D. Where Pedestrian Walkways Exist, Such Walkways Shall Be Maintained In Passable Condition Or Other Facilities For Pedestrians Shall Be Provided. Passage Between Walkways At Intersections Shall Likewise Be Provided.
- E. The Underground Pipes, Cables Or Ductlines Known By The Engineer To Exist From His Search Of Records Are Indicated On The Plans. The Contractor Shall Verify The Location And Depth Of The Facilities And Exercise Proper Care In Excavating The Area. Wherever Connections Of New Utilities To Existing Utilities Are Shown On The Plans, The Contractor Shall Expose The Existing Lines At The Proposed Connections To Verify Their Locations And Depths Prior To Excavation For The New Lines.
- F. Adhere To "Hawaiian Telcom Standard Specification For Placing Telephone Systems", Dated January 2007.

General Notes:

1. Contractor Shall Be Responsible To Arrange With The General Contractor To Identify The Locations Of Civil Site Utilities, Driveways, Etc. Prior To Electrical Contractors Layout Of Electric, Street Light, And Traffic Signal Systems.
2. Provide 3' Minimum Clear Between Pullboxes & Sewer Laterals.
3. Provide 6' Minimum Clear Between Electrical Equipment & Sewer Laterals (Do Not Straddle).
4. Provide 3' Minimum Clear Between Ductlines & Sewer Lines.
5. Contractor Shall Verify Sewer Lateral Locations With Civil Sheets.
6. Provide 3' Minimum Horizontal Clear & 6" Vertical Clear Between Water Lines & All Electrical Systems.
7. Provide 6" Minimum Vertical Clearance Between Ductlines & Drainlines.
8. Provide 12" Minimum Clearance Between Ductlines & Drainlines/drainage Structures.
9. Contractor Shall Contact Jon Okimoto At 768-8416 Prior To Start Of Work.

ELECTRICAL CONDUIT/CABLE SYMBOLS

SYMBOL			DESCRIPTION
EXST	DEMO	NEW	
			Conduit Homerun To Load Center As Noted
			Underground Conduit, 3/4" Min. Conduit. Min. 3" Conc Encasement.
			Electrical/Signal Underground Ductline. "A" Denotes Duct Section A, "2-3E" Denotes (2) 3" H.E. Ducts. See Sht E-24 For Duct Sections.
			Junction Box, Flush Wall Mtd, 4 11/16" Sq. x 3"D (Nom.), NEMA 1, Mtd +40" A.f.f From Top Of Fixture U.I.O.
			Note Symbol, Note 1 Indicated. See Plan For Notes.
			Standard Highway Light Pole With Single Luminaire
			Standard Highway Light Pole With Two Luminaires
			DOT Communications Pullbox
			Highway Lighting Pullbox
			Highway Lighting Pullbox
			Highway Lighting Pullbox
			Highway Lighting Pullbox
			Highway Lighting Pullbox
			Electrical Pullbox
			CCTV Camera Mounted To Existing Light Pole
			Traffic Signal Cabinet
			CCTV Cabinet, Type 332A
			Communications Hub Cabinet

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
No.	DESIGNED BY	
	CHECKED BY	



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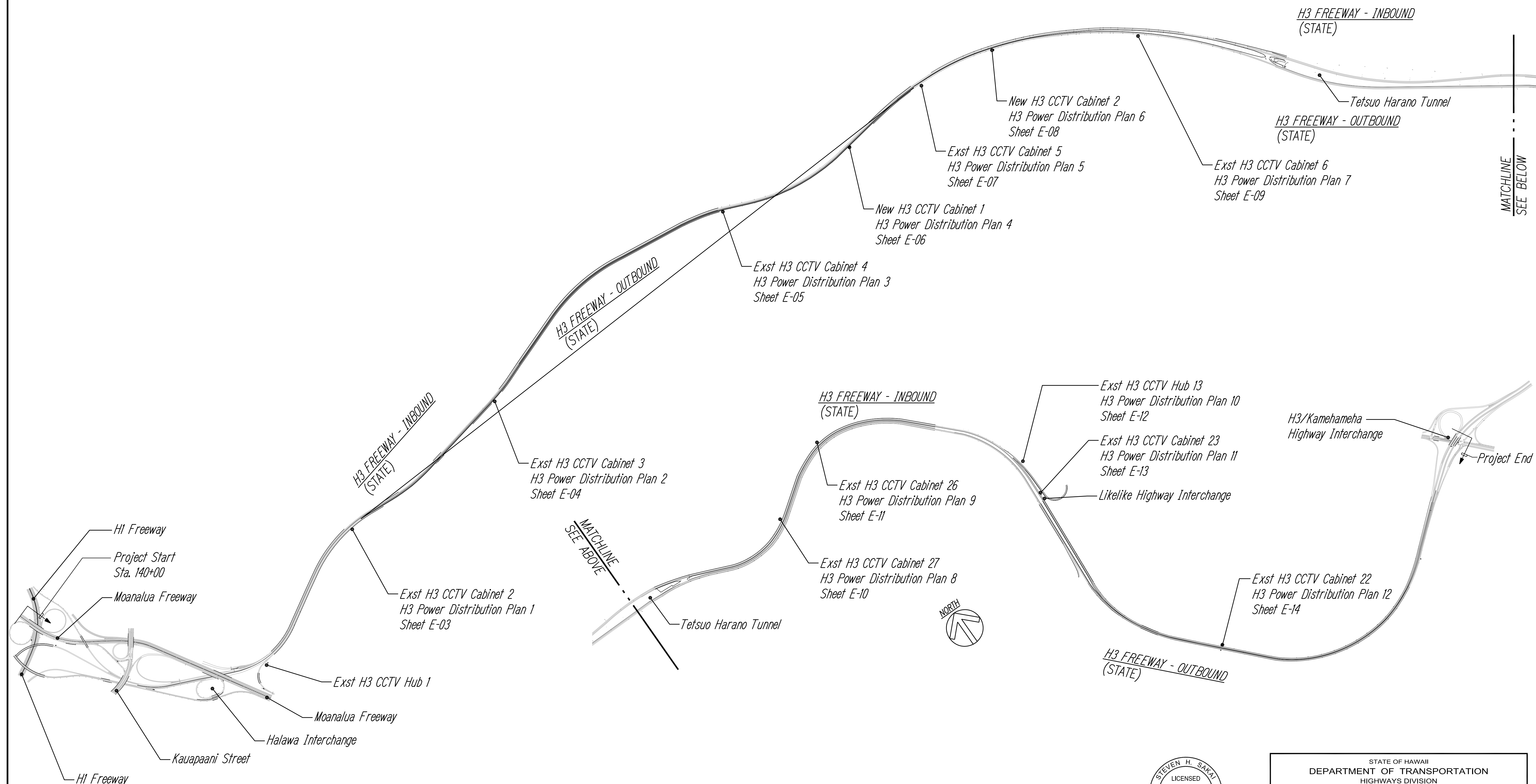
SYMBOL LIST

*Freeway Management System, Phase 4
 Federal-Aid Project No. NH-0300(176)*

Scale: As Noted Date: March 2026

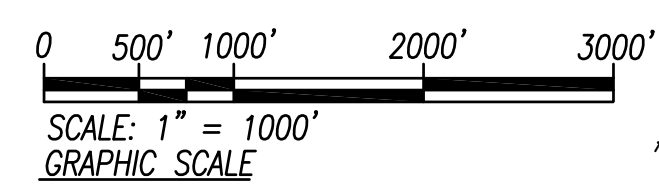
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	96	111



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ORIGINAL PLAN	
NOTE BOOK	
No.	

H3 POWER DISTRIBUTION SITE PLAN
SCALE: 1" = 1000'



STEVEN H. SAKAI
LICENSED PROFESSIONAL ENGINEER
No. 7637-E
HAWAII, U.S.A.

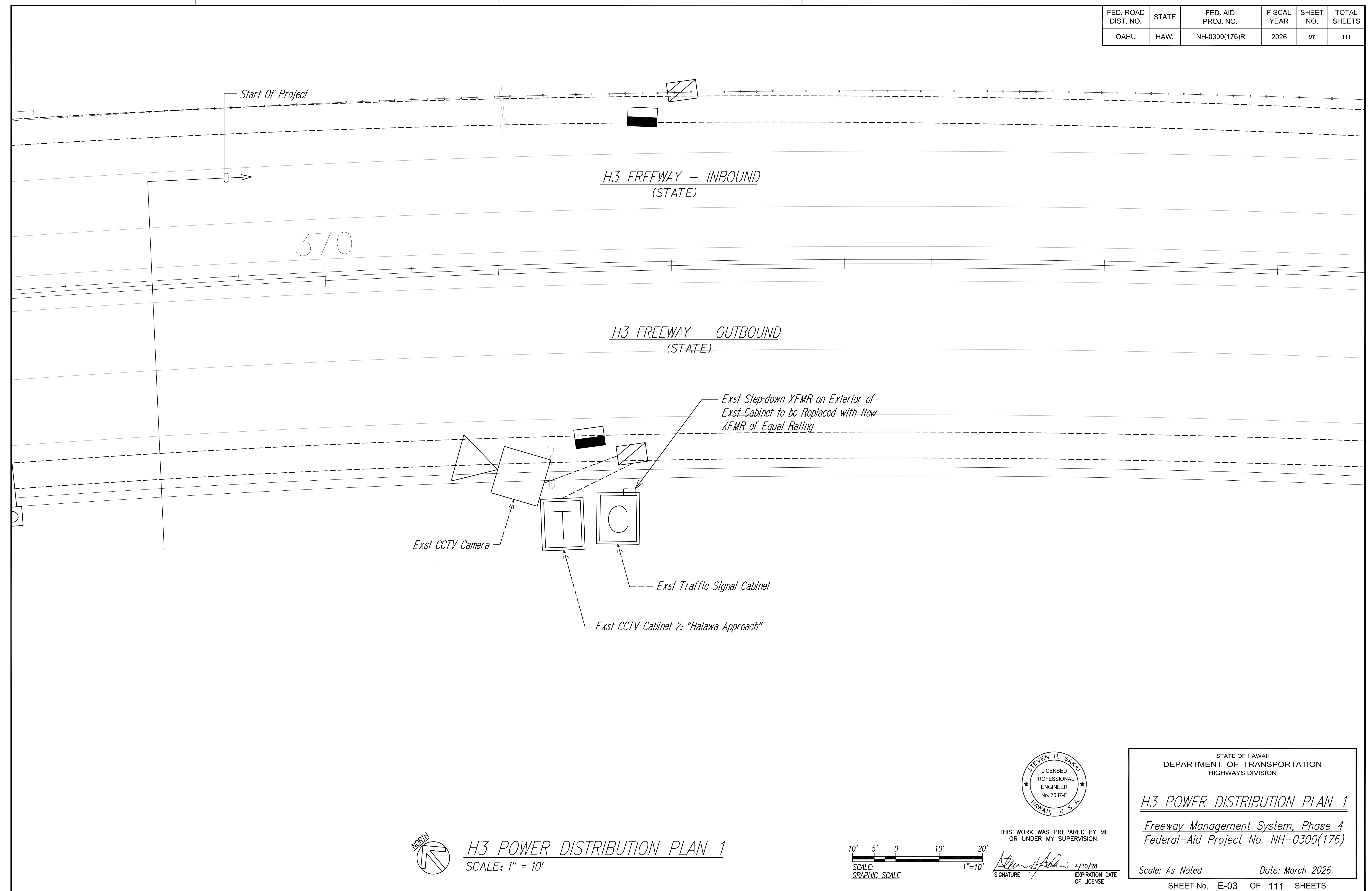
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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
H3 POWER DISTRIBUTION
SITE PLAN
Freeway Management System, Phase 4
Federal-Aid Project No. NH-0300(176)

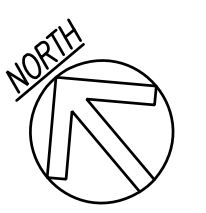
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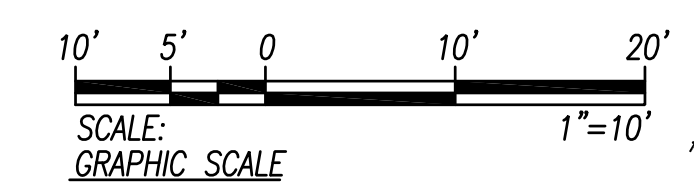
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OAHU	HAW.	NH-0300(176)R	2026	97	111



ORIGINAL PLAN No. _____	SURVEY PLOTTED BY _____	DATE _____
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H3 POWER DISTRIBUTION PLAN 1
SCALE: 1" = 10'



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LICENSED PROFESSIONAL ENGINEER
No. 7637-E
HAWAII, U.S.A.

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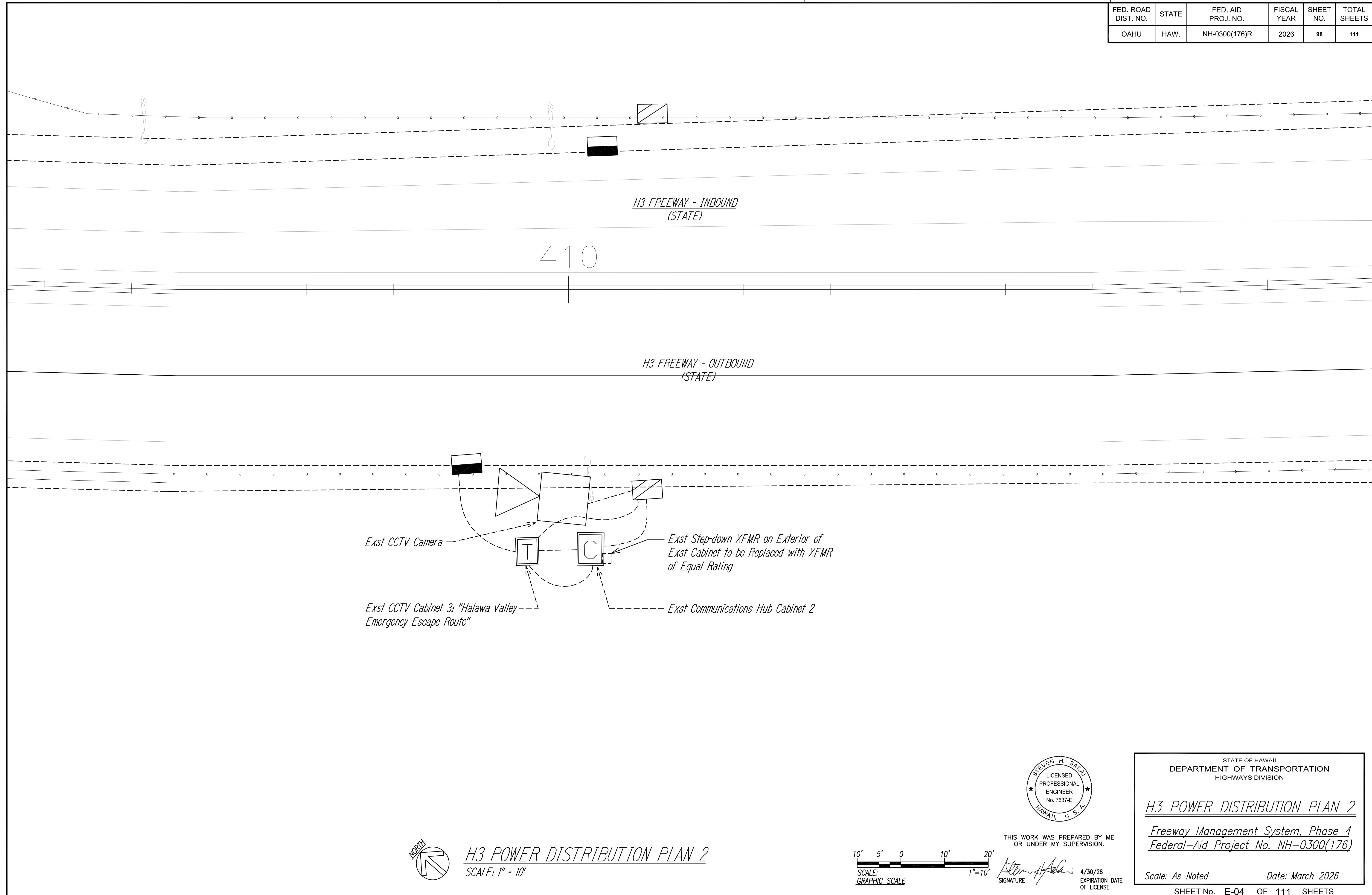
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HIGHWAYS DIVISION

H3 POWER DISTRIBUTION PLAN 1
Freeway Management System, Phase 4
Federal-Aid Project No. NH-0300(176)

Scale: As Noted Date: March 2026

SHEET No. E-03 OF 111 SHEETS

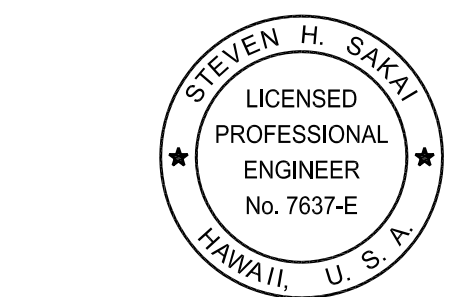
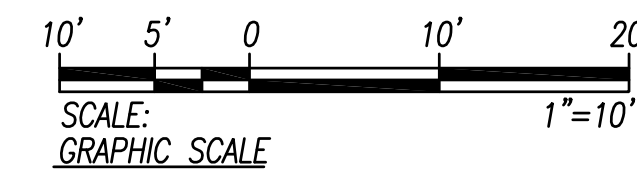
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OAHU	HAW.	NH-0300(176)R	2026	98	111



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	CHECKED BY	" "



H3 POWER DISTRIBUTION PLAN 2
SCALE: 1" = 10'



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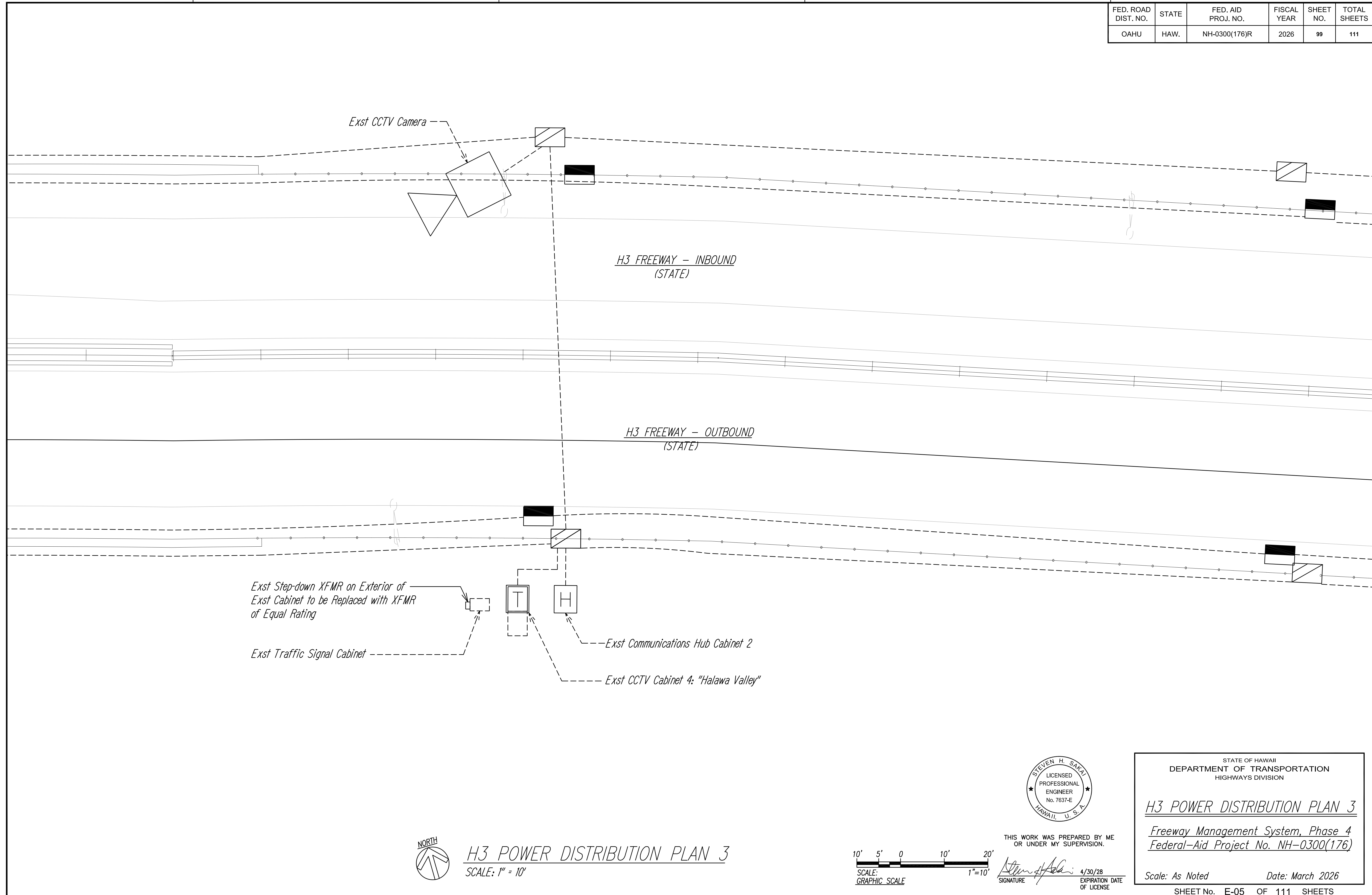
STATE OF HAWAII
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 HIGHWAYS DIVISION

H3 POWER DISTRIBUTION PLAN 2
Freeway Management System, Phase 4
Federal-Aid Project No. NH-0300(176)

Scale: As Noted Date: March 2026

SHEET No. E-04 OF 111 SHEETS

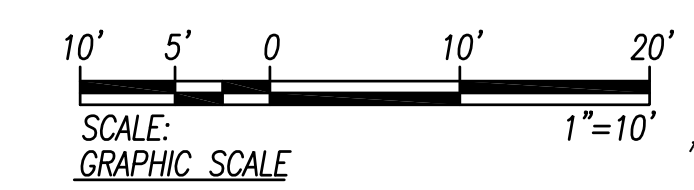
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OAHU	HAW.	NH-0300(176)R	2026	99	111



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H3 POWER DISTRIBUTION PLAN 3
SCALE: 1" = 10'



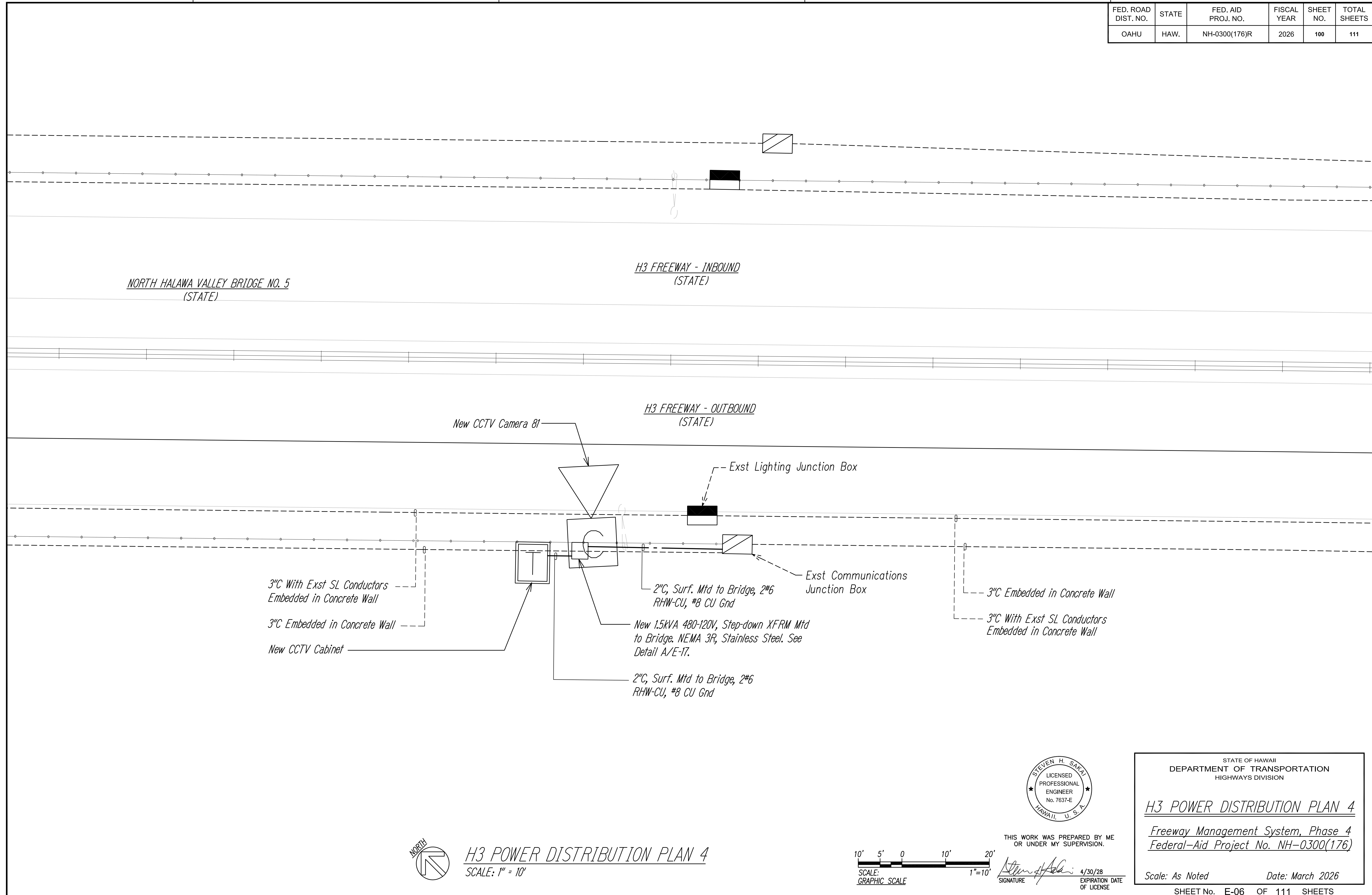
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

H3 POWER DISTRIBUTION PLAN 3
Freeway Management System, Phase 4
Federal-Aid Project No. NH-0300(176)

Scale: As Noted Date: March 2026
SHEET No. E-05 OF 111 SHEETS

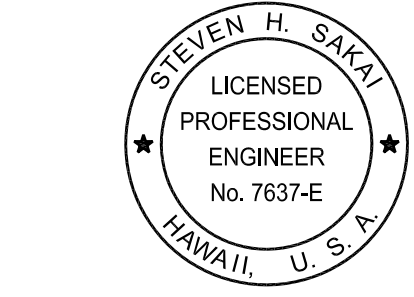
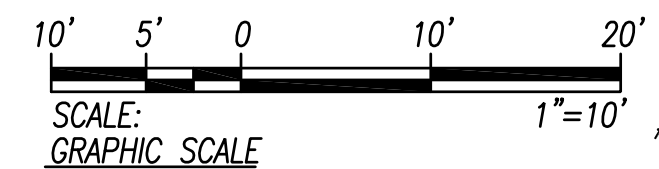
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OAHU	HAW.	NH-0300(176)R	2026	100	111



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H3 POWER DISTRIBUTION PLAN 4
SCALE: 1" = 10'



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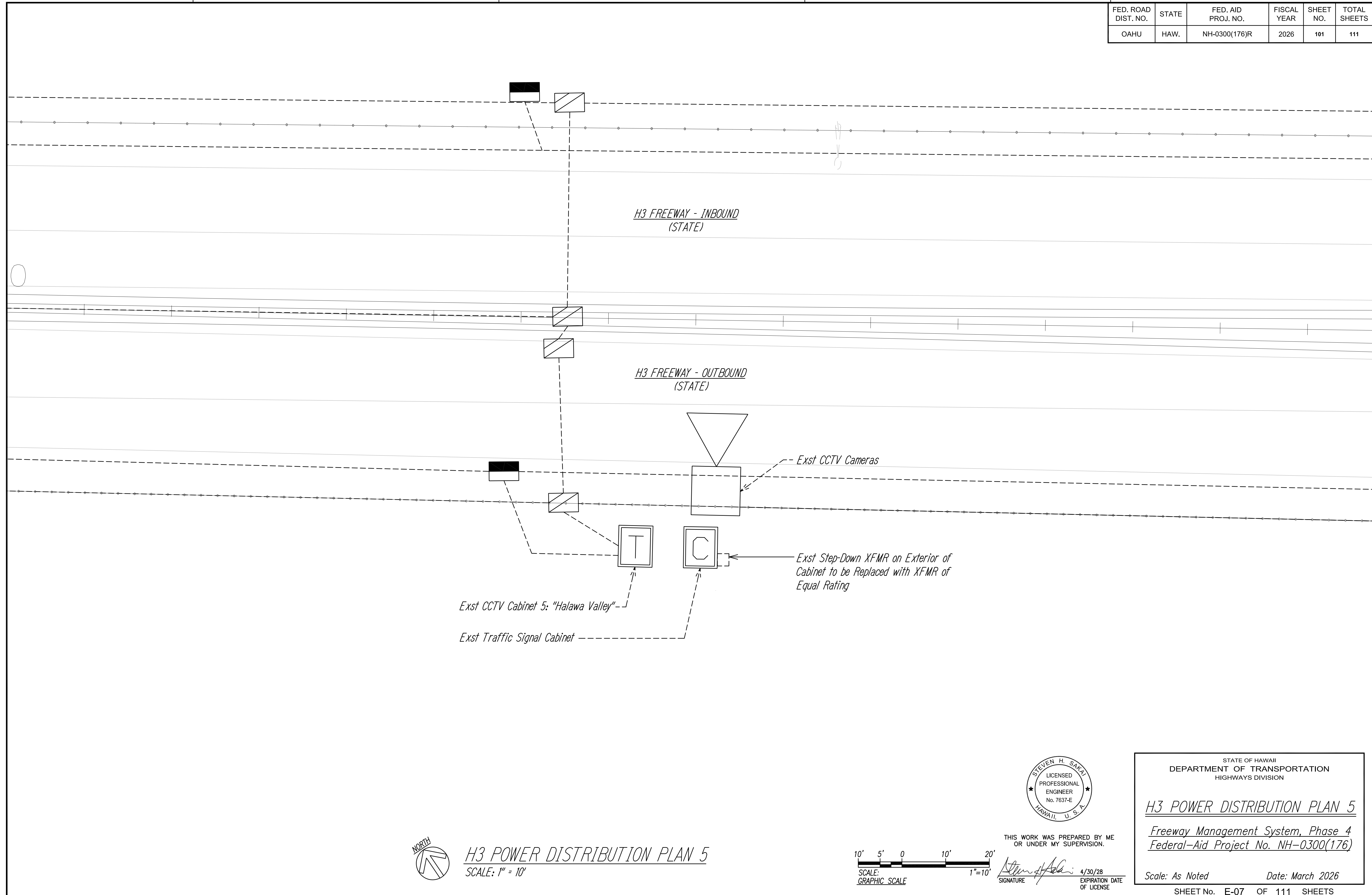
STATE OF HAWAII
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 HIGHWAYS DIVISION

H3 POWER DISTRIBUTION PLAN 4
Freeway Management System, Phase 4
Federal-Aid Project No. NH-0300(176)

Scale: As Noted Date: March 2026

SHEET No. E-06 OF 111 SHEETS

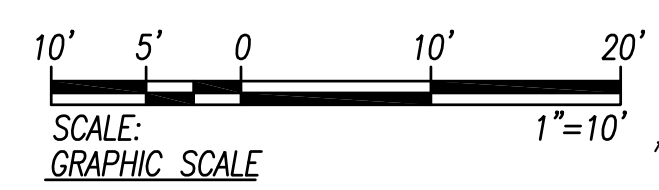
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OAHU	HAW.	NH-0300(176)R	2026	101	111



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H3 POWER DISTRIBUTION PLAN 5
SCALE: 1" = 10'



STEVEN H. SAKAI
LICENSED PROFESSIONAL ENGINEER
No. 7637-E
HAWAII, U.S.A.

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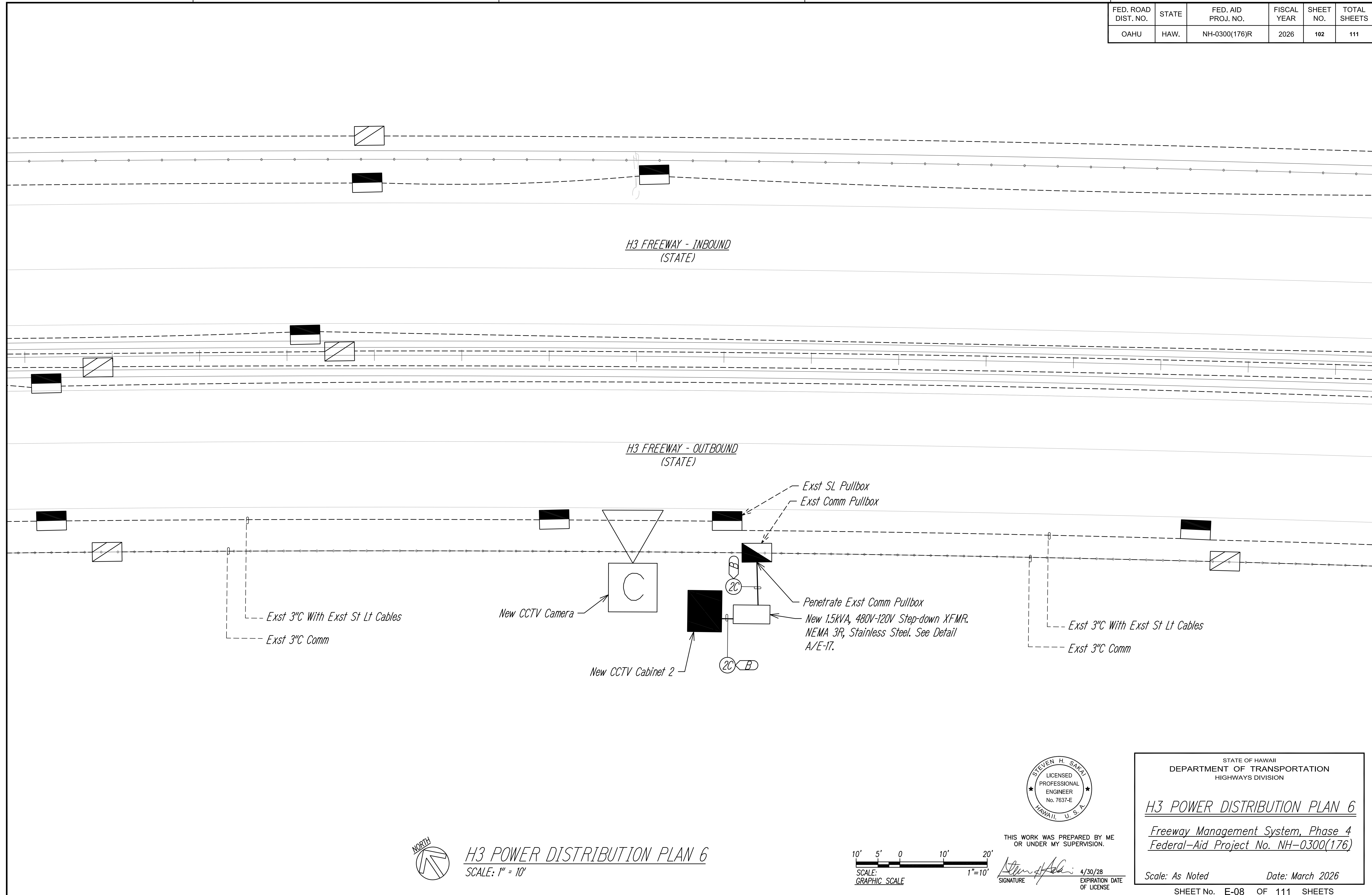
STATE OF HAWAII
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HIGHWAYS DIVISION

H3 POWER DISTRIBUTION PLAN 5
Freeway Management System, Phase 4
Federal-Aid Project No. NH-0300(176)

Scale: As Noted Date: March 2026

SHEET No. E-07 OF 111 SHEETS

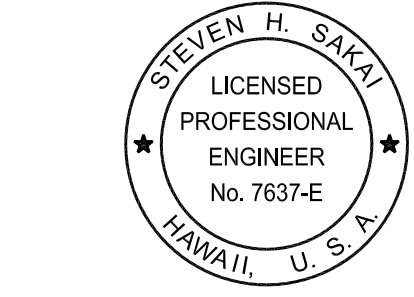
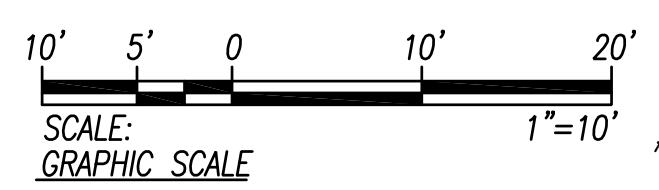
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OAHU	HAW.	NH-0300(176)R	2026	102	111



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H3 POWER DISTRIBUTION PLAN 6
SCALE: 1" = 10'



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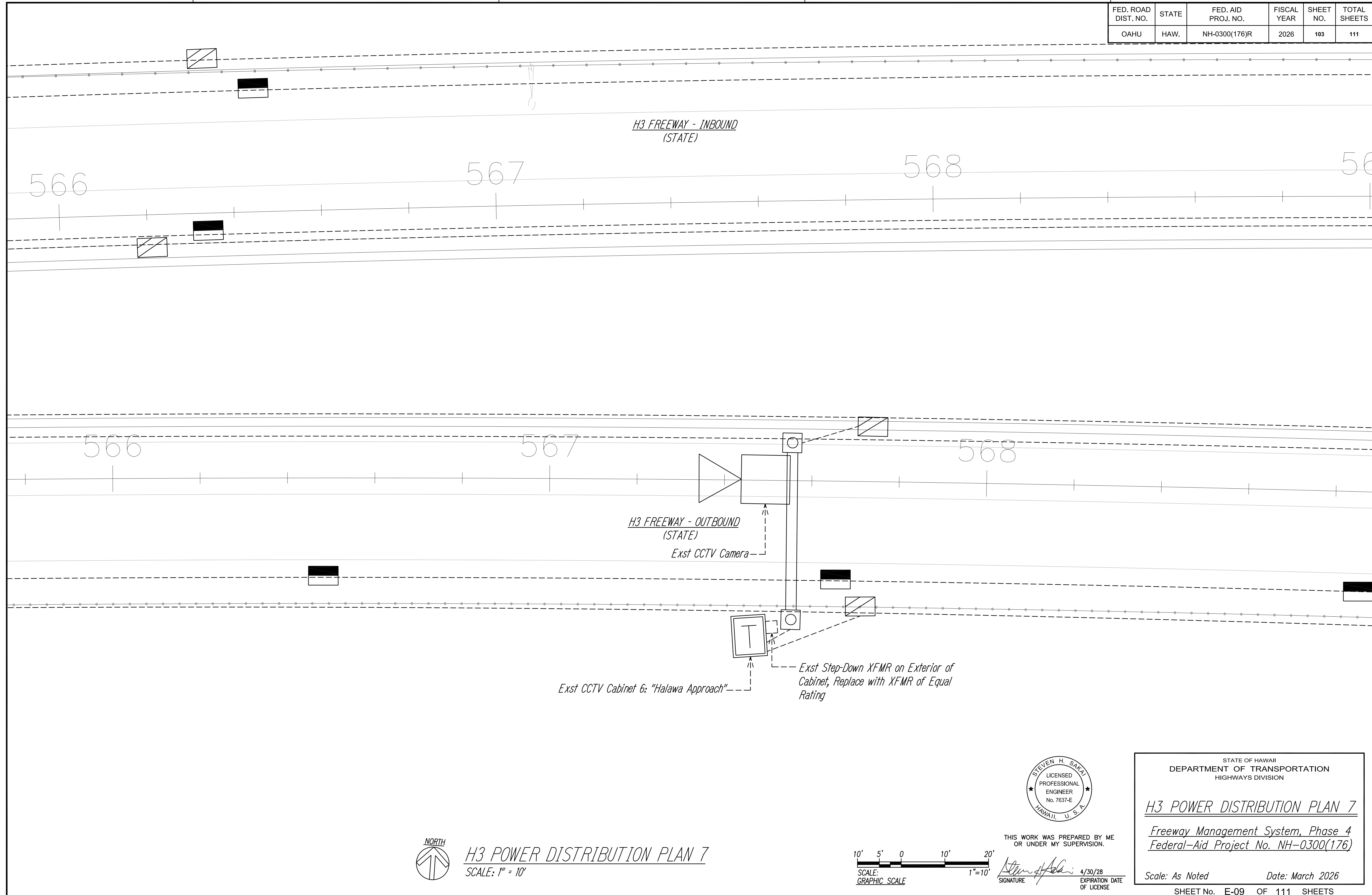
STATE OF HAWAII
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 HIGHWAYS DIVISION

H3 POWER DISTRIBUTION PLAN 6
Freeway Management System, Phase 4
 Federal-Aid Project No. NH-0300(176)

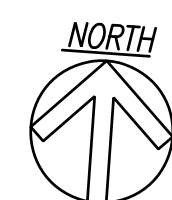
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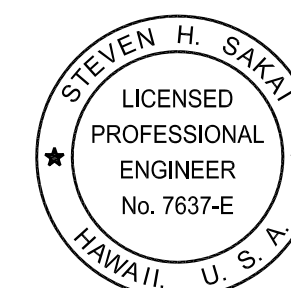
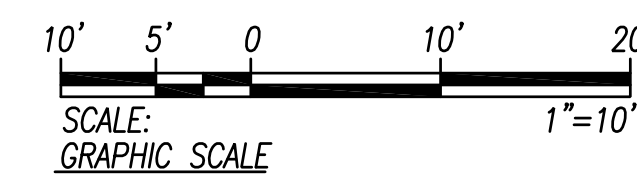
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OAHU	HAW.	NH-0300(176)R	2026	103	111



SURVEY PLOTTED BY	DATE
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DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
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H3 POWER DISTRIBUTION PLAN 7
SCALE: 1" = 10'



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SIGNATURE: *Steven H. Sakai* EXPIRATION DATE OF LICENSE: 4/30/28

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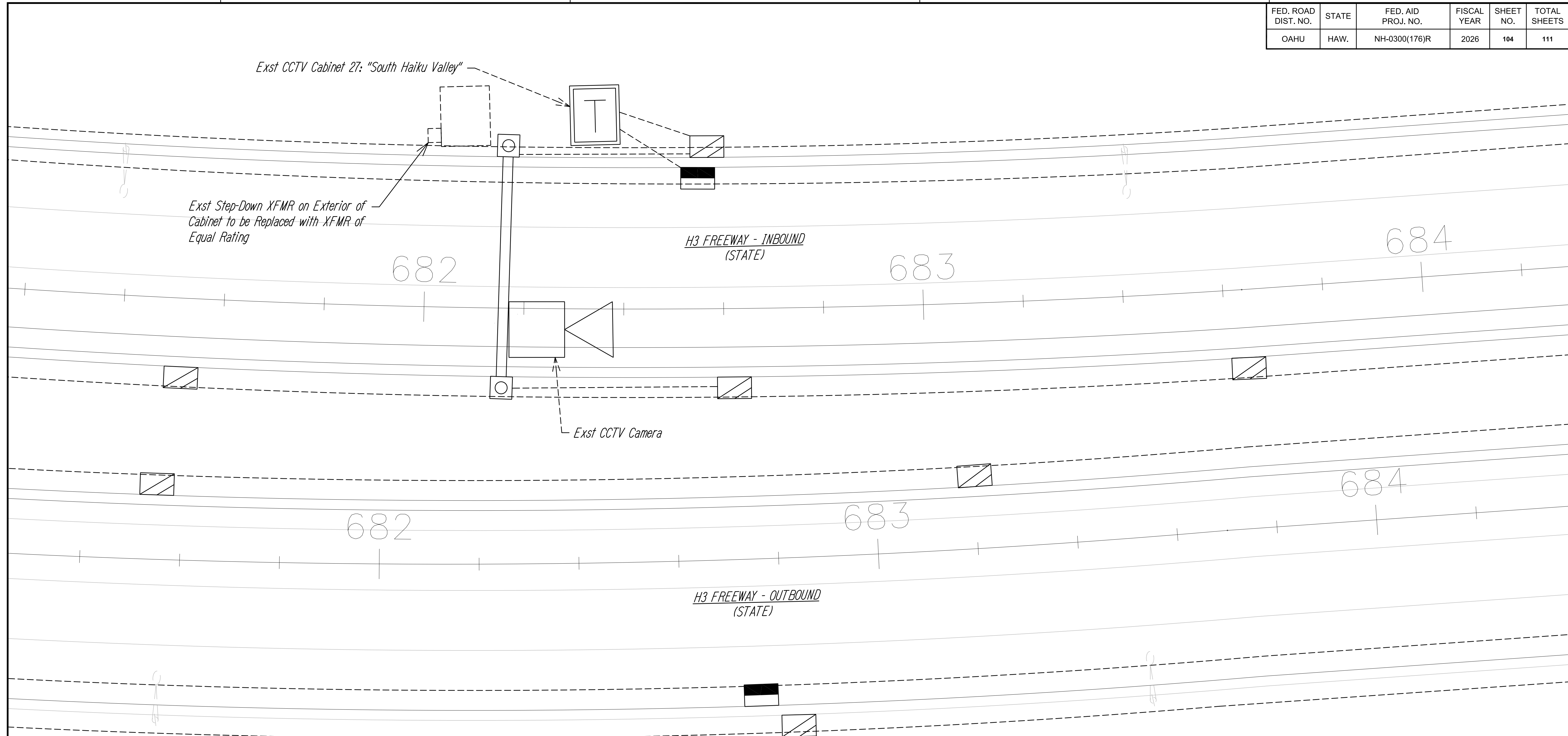
H3 POWER DISTRIBUTION PLAN 7

Freeway Management System, Phase 4
Federal-Aid Project No. NH-0300(176)

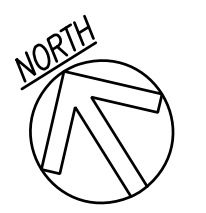
Scale: As Noted Date: March 2026

SHEET No. E-09 OF 111 SHEETS

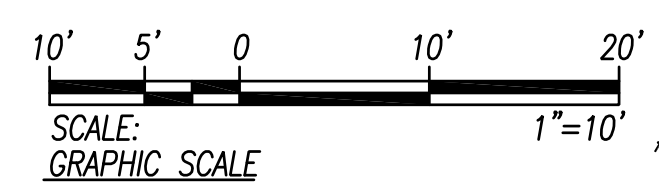
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	104	111



SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	



H3 POWER DISTRIBUTION PLAN 8
SCALE: 1" = 10'



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HAWAII, U.S.A.

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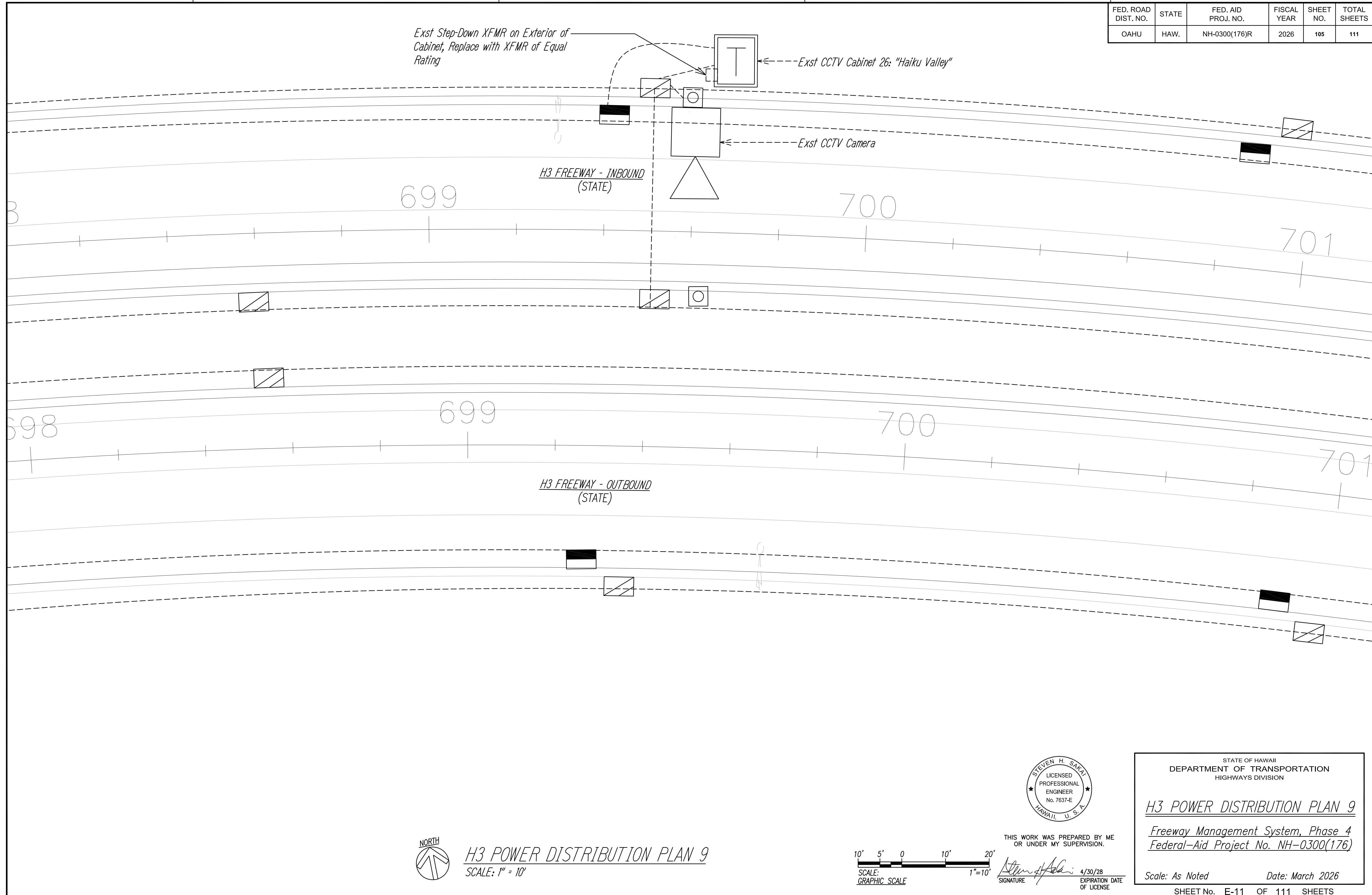
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

H3 POWER DISTRIBUTION PLAN 8
Freeway Management System, Phase 4
Federal-Aid Project No. NH-0300(176)

Scale: As Noted Date: March 2026

SHEET No. E-10 OF 111 SHEETS

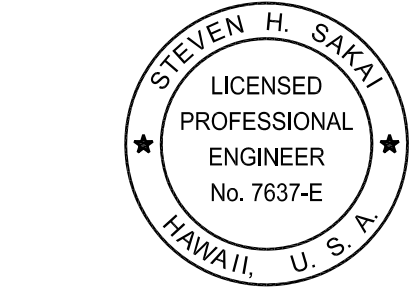
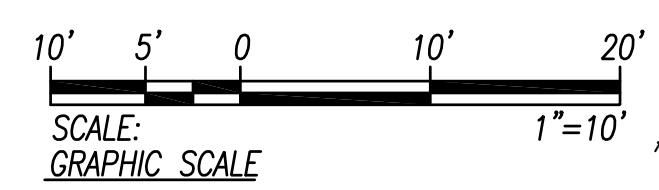
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OAHU	HAW.	NH-0300(176)R	2026	105	111



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	" "
No. _____	DESIGNED BY	" "
	QUANTITIES BY	" "
	CHECKED BY	" "



H3 POWER DISTRIBUTION PLAN 9
 SCALE: 1" = 10'



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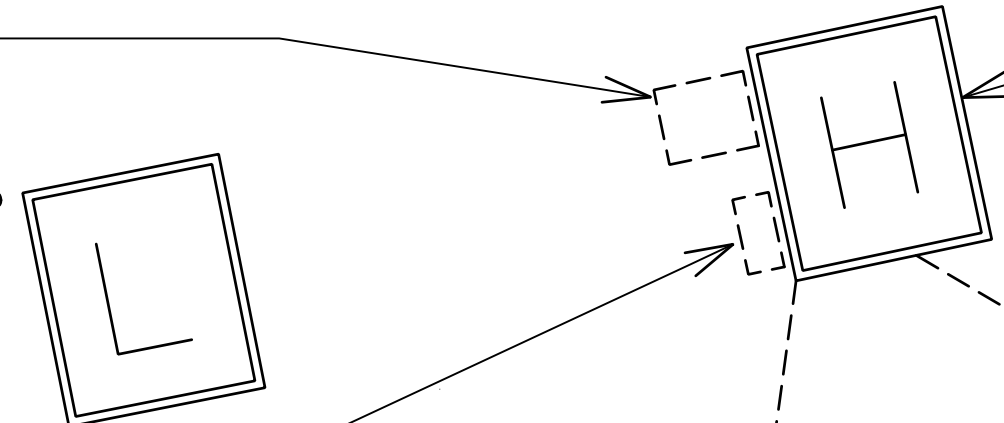
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Freeway Management System, Phase 4
Federal-Aid Project No. NH-0300(176)

Scale: As Noted
 Date: March 2026

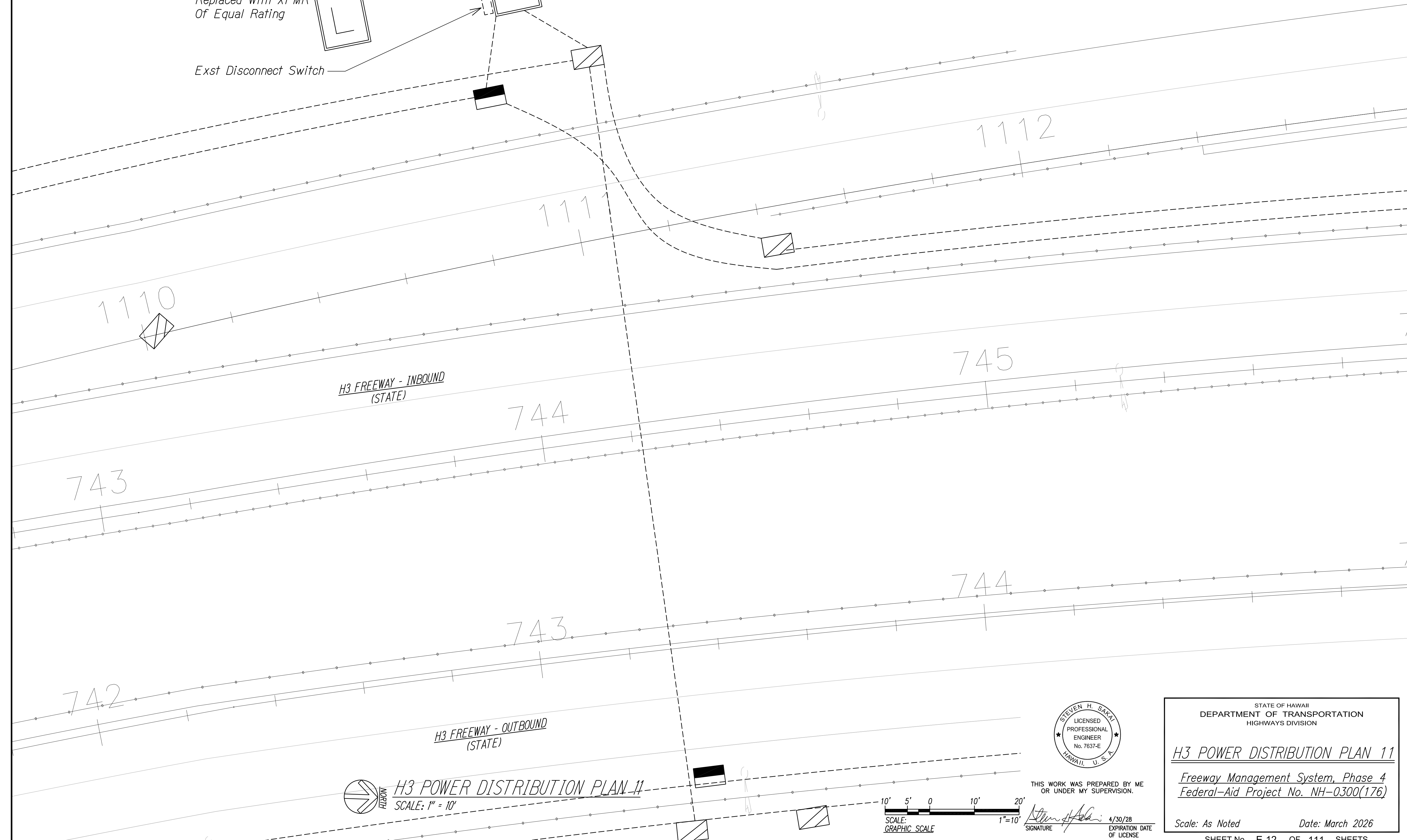
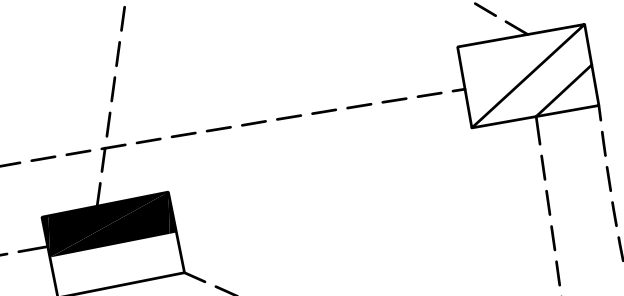
SHEET No. E-11 OF 111 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	106	111

Exst Step-Down
XFMR On Exterior
Of Cabinet To Be
Replaced With XFMR
Of Equal Rating



Exst Disconnect Switch



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QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	



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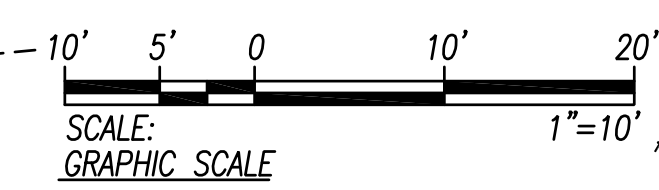
STATE OF HAWAII
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HIGHWAYS DIVISION

H3 POWER DISTRIBUTION PLAN 11

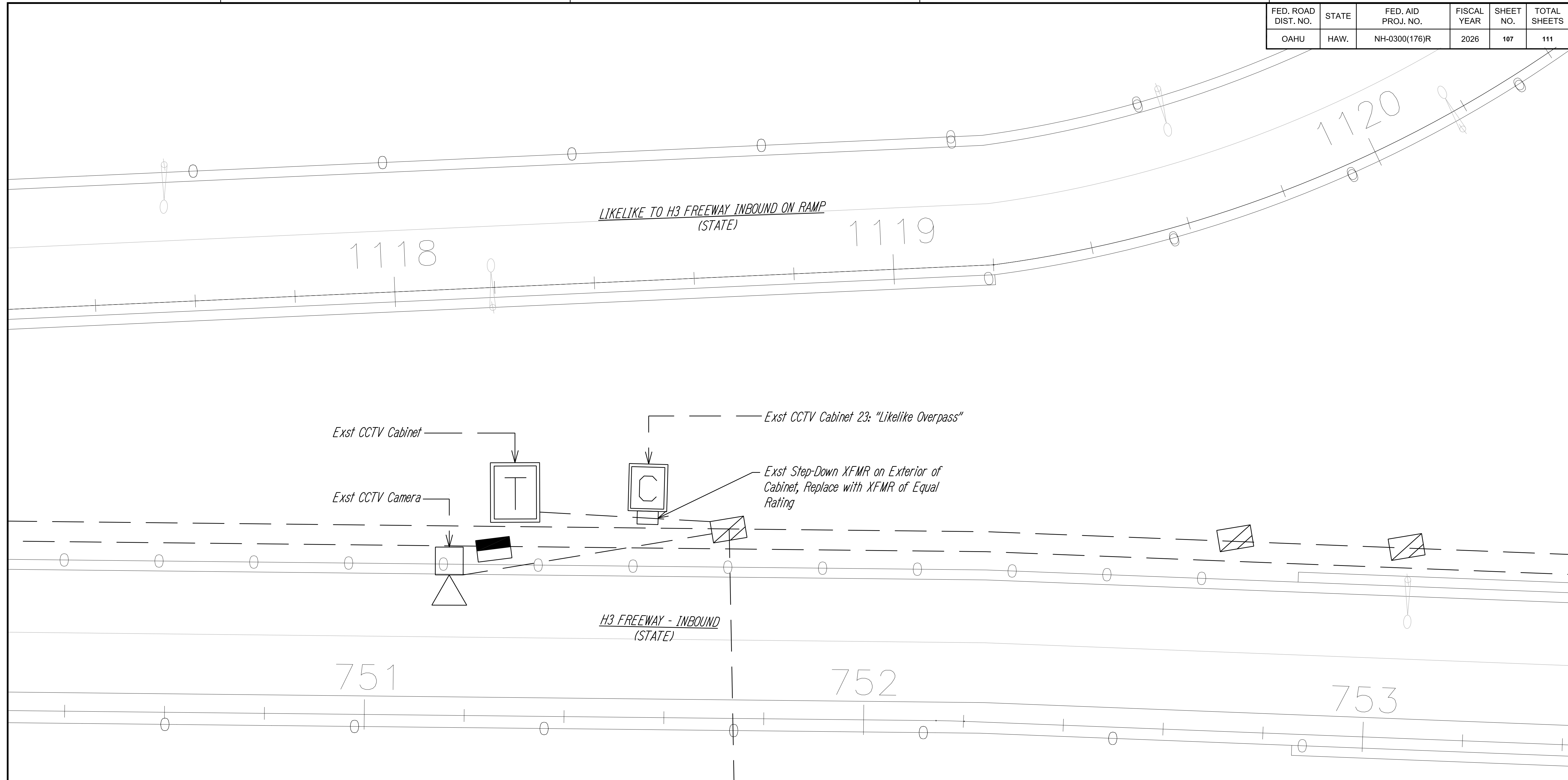
Freeway Management System, Phase 4
Federal-Aid Project No. NH-0300(176)

Scale: As Noted Date: March 2026

SHEET No. E-12 OF 111 SHEETS

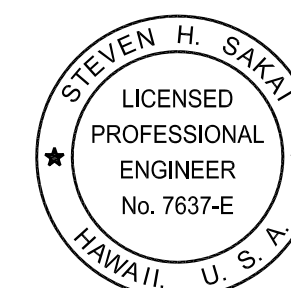
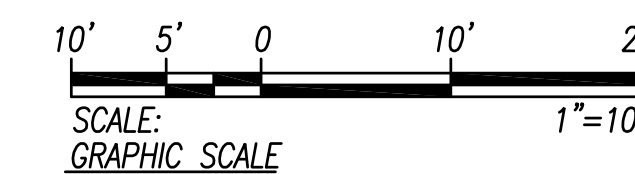


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	107	111



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No.	DESIGNED BY	
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H3 POWER DISTRIBUTION PLAN 10
SCALE: 1" = 10'



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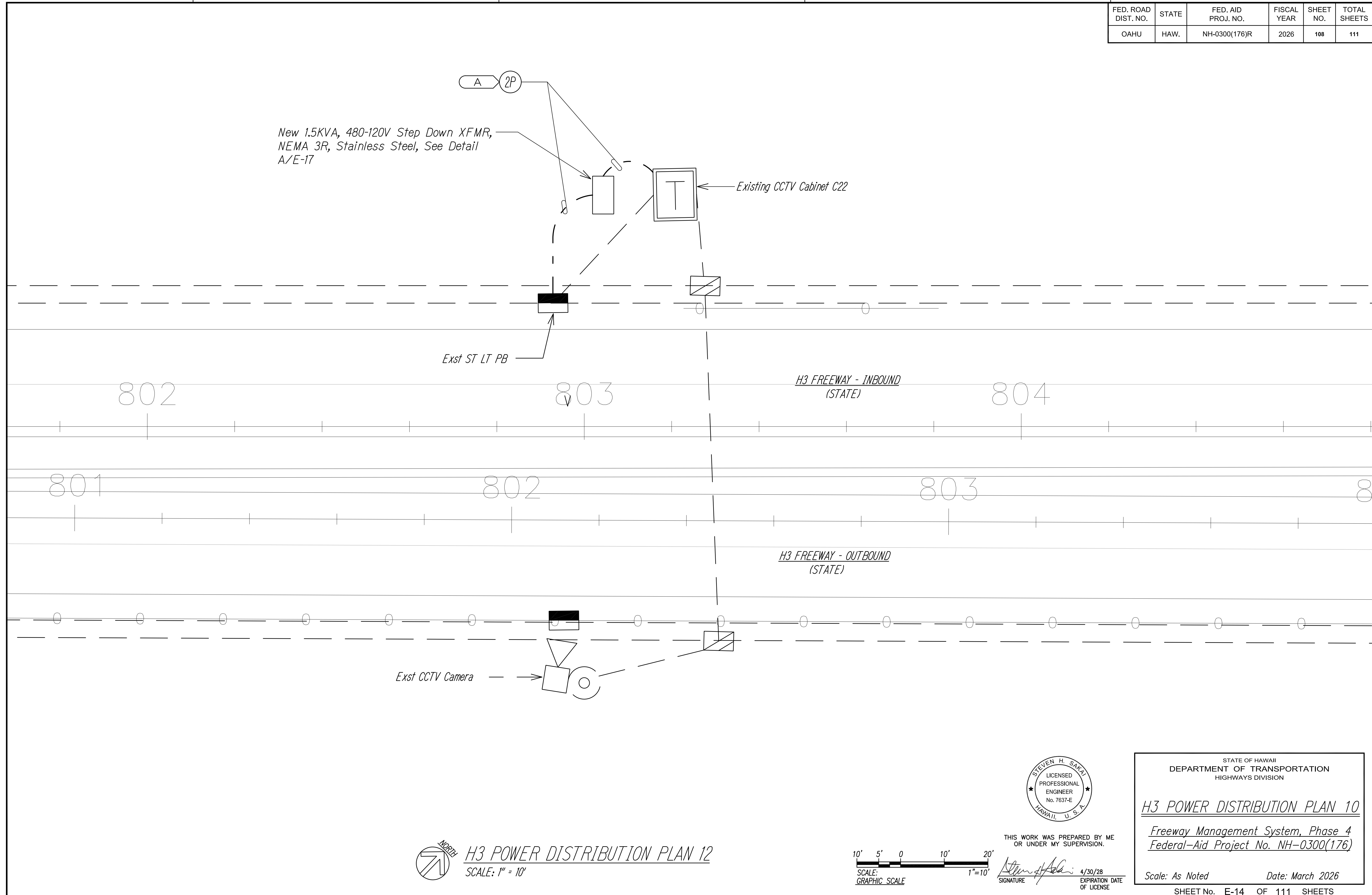
H3 POWER DISTRIBUTION PLAN 10

Freeway Management System, Phase 4
Federal-Aid Project No. NH-0300(176)

Scale: As Noted Date: March 2026

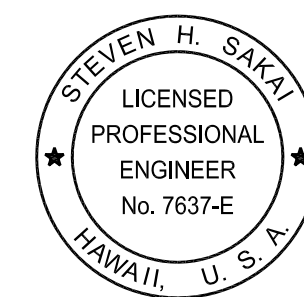
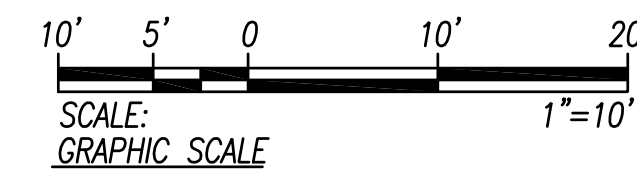
SHEET No. E-13 OF 111 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	108	111



ORIGINAL PLAN No. _____	SURVEY PLOTTED BY _____	DATE _____
NOTE BOOK No. _____	DRAWN BY _____	DESIGNED BY _____
	QUANTITIES BY _____	CHECKED BY _____

H3 POWER DISTRIBUTION PLAN 12
SCALE: 1" = 10'



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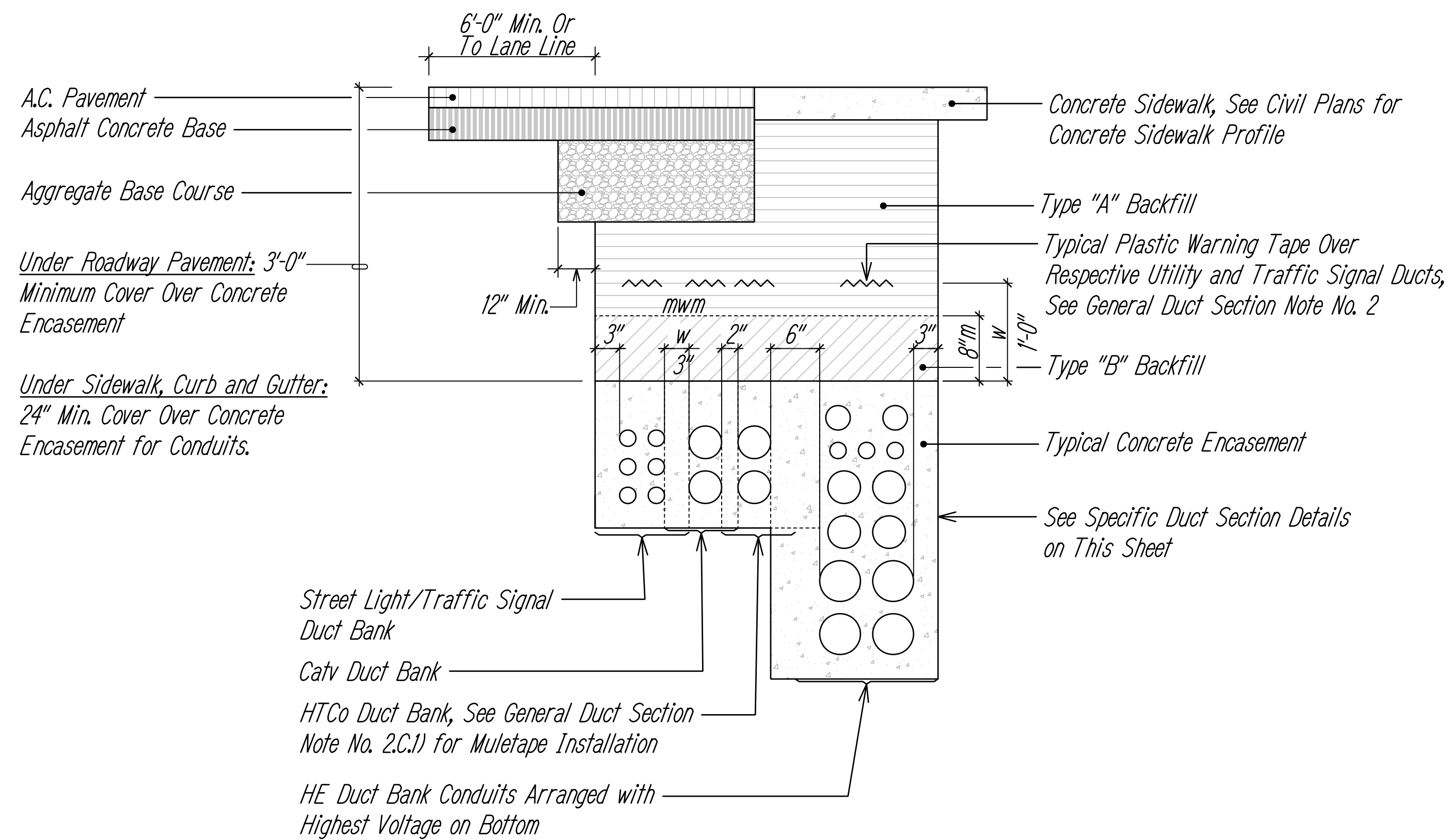
STATE OF HAWAII
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HIGHWAYS DIVISION

H3 POWER DISTRIBUTION PLAN 10

Freeway Management System, Phase 4
Federal-Aid Project No. NH-0300(176)

Scale: As Noted Date: March 2026

SHEET No. E-14 OF 111 SHEETS



Minimum Duct Separation Dimension Between Duct Systems (Concrete Encased):

Elec - Elec:	1.5"
Elec - Other Systems:	6"
Tel - Tel:	1.5"
Tel - Elec:	6"
Tel - CATV:	2"
CATV - CATV:	1.5"
CATV - Elec:	6"
CATV - Tel:	2"

Minimum of 3" Concrete Encasement shall be Provided Around Ductbank

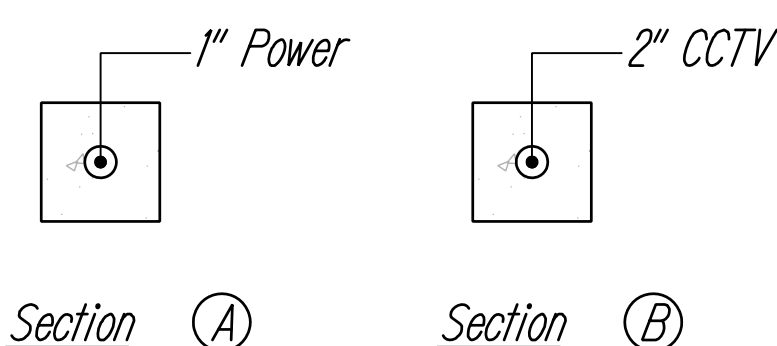
BACKFILL NOTES:

- Type "A" Backfill - Earth & Gravel. Rock Size to be 1" Max & The Mixture to Contain Not More Than 50% by Volume of Rock Particles. The Material shall be Nonexpansive. 95% Compaction.
- Type "B" Backfill - Earth & Gravel. Mixture Must Pass a 1/2" Mesh Screen & Contain Not More Than 20% by Volume of Rock Particles. 95% Compaction.
- No. 67 Gravel - Open-Graded Gravel. AASHTO M43, No. 67 gradation materials. 95% Compaction.
- Note - If Normal Material at Bottom of Trench is Not Type "B", an Additional 3" shall be Excavated & Type "B" Backfill Provided.
- Concrete - 3" Encasement, 2500 PSI Compressive Strength @ 28 Days, with a Maximum Aggregate Size of 3/4".

A TYPICAL DUCT CONCRETE ENCASEMENT DETAILS
E-15 NOT TO SCALE

GENERAL DUCT SECTION NOTES:

- The Metal Detectable Red Plastic Warning Tape shall be a Minimum 5 mils Thick and 4" Wide with a Continuous Metallic Backing and Corrosion Resistant 1' min Thick Foil Core. For the State DOT Highway Lighting Ducts, the Message on the Tape shall Read, "CAUTION - STATE HIGHWAY CABLES BURIED BELOW," Utilizing 1 1/2 Inches Series "C" Block Lettering. The Message will be Repeated with a 4 1/4" Spacing Between Top Line of Message and Start of Next Repeat. For the Private Street Lighting Ducts, the Message on the Tape shall Read, "CAUTION - STREET LIGHTING CABLES BURIED BELOW," Utilizing 1 1/2 Inches Series "C" Block Lettering. The message will be Repeated with a 4 1/4" Spacing Between Top Line of Message and Start of Next Repeat.
 - For the Respective Utility Company Ducts, Provide Metal Detectable Warning Tape Over Respective Utility Company Ducts per Respective Utility Company Requirements and Approval.
 - For HE, Provide Warning Tape per HE Specification M0302-0.
 - For HTCo:
 - Contractor shall Place Muletape (SP 1800P) in each Duct Throughout its Entire Length with Protrusions of 2 Feet in Manholes and Handholes at each End, and 1 Foot in Pullboxes. Muletape is Rated for 1800 lb Pull and has Footage Markings for Measuring Duct Lengths.
 - Contractor Shall Place 8-mil Orange Colored Plastic Warning Tape, Not Less than 4" Wide, Entire Length of Trench for All Underground Installations. Tape should Read "WARNING-STOP DIGGING-CALL HTCo, COMMUNICATIONS ABLE BURIED BELOW, FAILURE TO COMPLY COULD RESULT IN LEGAL ACTION".
- The Contractor may begin Backfilling the Conduit Trench when the Concrete Reaches 2800 PSI Compressive Strength or After 3 Days, Whichever is Later.
- Clearances: Refer to HE Note No. 14 for Clearance Requirements Between All Ductlines and All Adjacent Structures (Charted and Uncharted) Near the Trench.
- All Traffic Signal Conduit Shall be Encased in Concrete with 3" Minimum Concrete Jacket around Ducts.

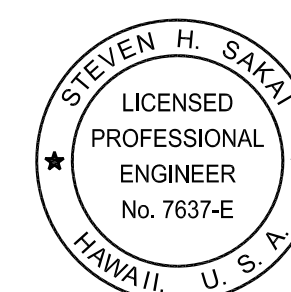


B TYPICAL DUCT SECTION DETAILS
E-15 NOT TO SCALE

MISC. CONDUIT SCHEDULE	
2C	Communication 1-2°C, Conc. Encased
2P	Power 1-2°C, Conc. Encased

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TRENCHING AND DUCT SECTION DETAILS
NOT TO SCALE



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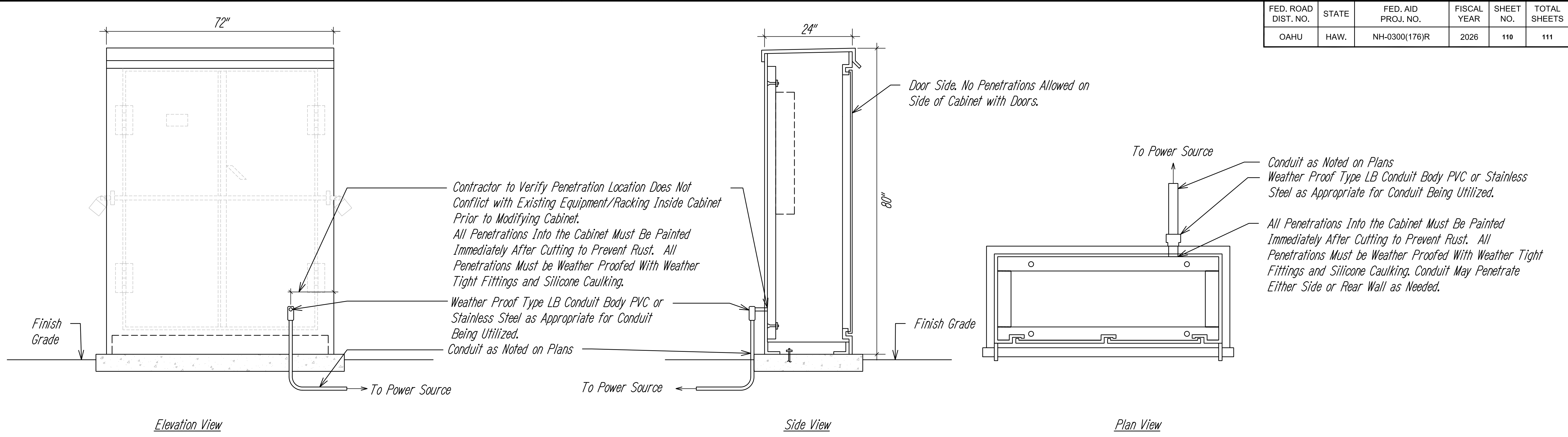
TRENCHING AND DUCT DETAILS

Freeway Management System, Phase 4
Federal-Aid Project No. NH-0300(176)

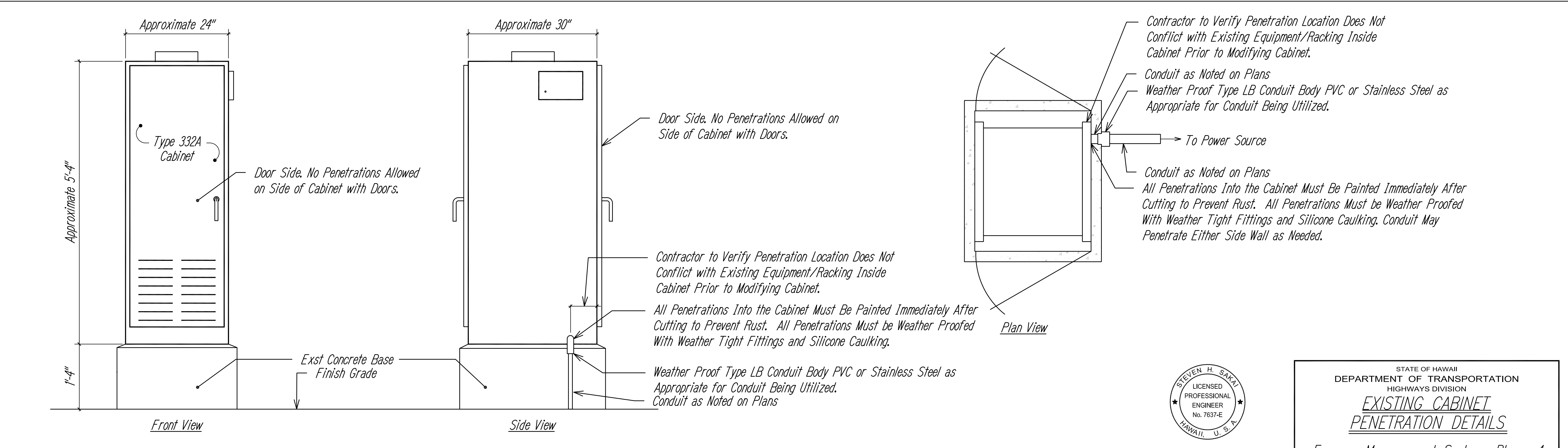
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SHEET No. E-15 OF 111 SHEETS

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OAHU	HAW.	NH-0300(176)R	2026	110	111



A EXISTING STREET LIGHT CAB PENETRATION DETAIL
E-16 NOT TO SCALE



B EXISTING CCTV HUB PENETRATION DETAIL
E-16 NOT TO SCALE

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ORIGINAL PLAN	
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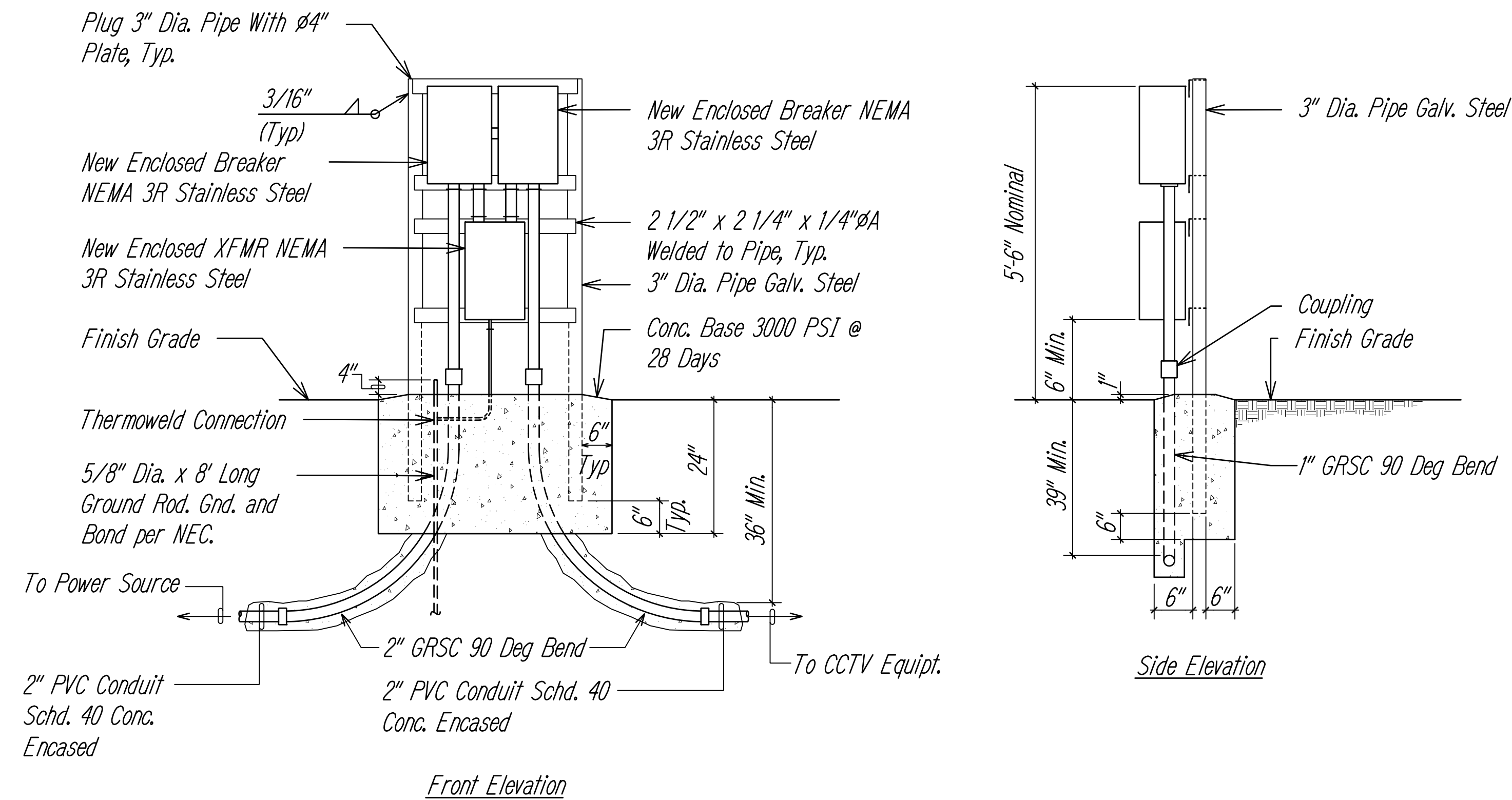
EXISTING CABINET PENETRATION DETAILS

Freeway Management System, Phase 4
Federal-Aid Project No. NH-0300(176)

Scale: As Noted Date: March 2026

SHEET No. E-16 OF 111 SHEETS

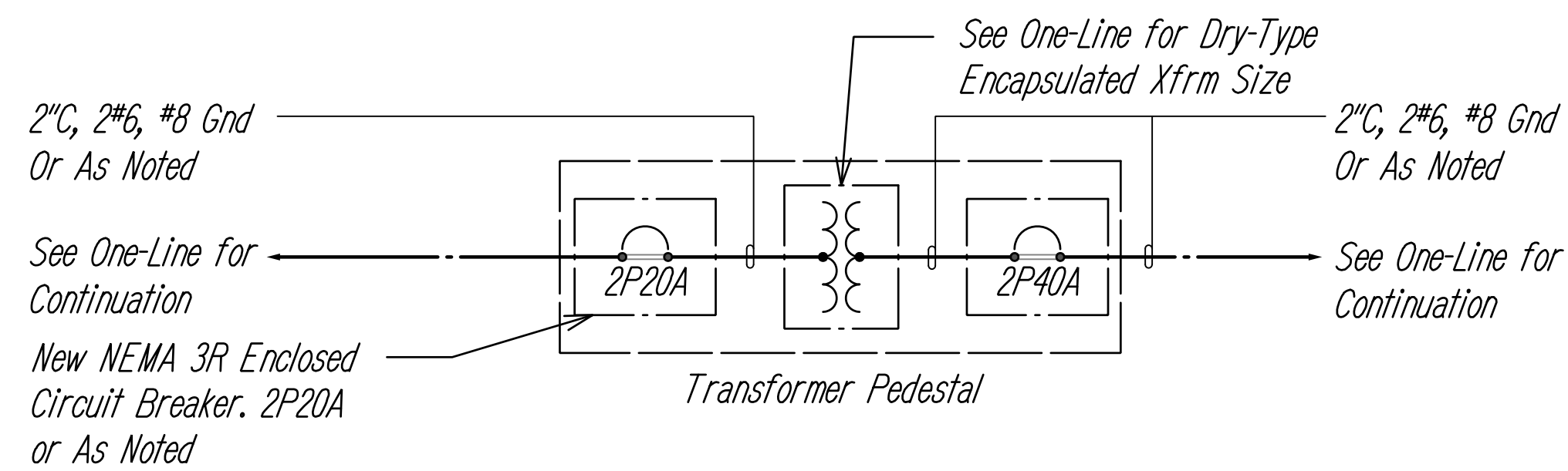
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
OAHU	HAW.	NH-0300(176)R	2026	111	111



Notes:

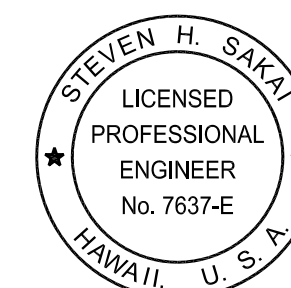
1. All Conduits to Contain a Polyolefin Pull Line. (Jet Line Cat. #232 or Equivalent)
2. Pedestal shall be Hot-Dipped Galvanized After Fabrication.
3. All Fastening Bolts, Nuts & Washers Shall be 316 Stainless Steel.
4. See One-Line Diagram, This Sheet.
5. Contractor Shall Make All Electrical Connection to Cabinet.
6. All Connections to Xfmr shall be Liquid Tight, Flex Metal Conduit.

A STEP-UP/DOWN TRANSFORMER MOUNTING DETAIL
E-17 NOT TO SCALE



B XFMR PEDESTAL TYPICAL ONE-LINE DIAGRAM
E-17 NOT TO SCALE

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MISCELLANEOUS DETAILS

*Freeway Management System, Phase 4
Federal-Aid Project No. NH-0300(176)*

Scale: As Noted Date: March 2026

SHEET No. E-17 OF 111 SHEETS